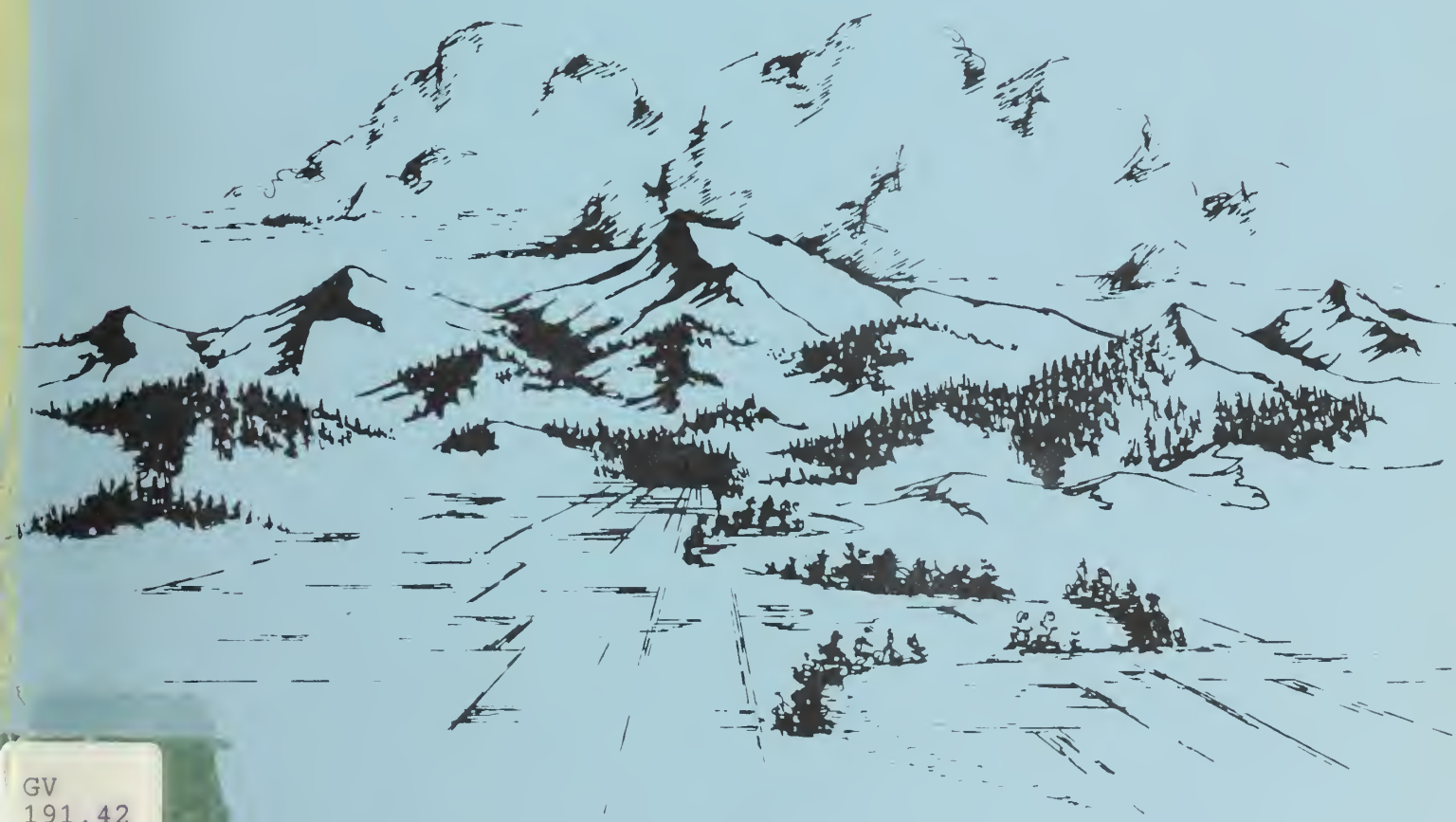
BLM LIBRARY
88047182

LIBRARY
Box 10

Upper Klamath River Recreation Study

By: Katherine Bridwell
Bureau of Land Management
— Redding District Office



GV
191.42
.C2
B753
1976

Resources Development Internship Program
Western Interstate Commission for Higher Education

Bureau of Land Management
Library
Denver Service Center

This report has been catalogued by the WICHE Library as follows:

Bridwell, Katherine
Upeer Klamath River recreation study/
by Katherine Bridwell. -- Boulder, CO:
Western Interstate Commission for Higher
Education, 1976.
89p.

1. California - Recreation. 2. Klamath
River. I. United States. Bureau of Land Management. II. Western Interstate Commission
for Higher Education. Resources Development
Internship Program. III.Title.

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

The ideas and opinions expressed in this report are those of the author. They do not necessarily reflect the views of the WICHE Commissioners or WICHE staff.

The Resources Development Internship Program has been financed during 1975 by grants from the Economic Development Administration, the Jessie Smith Noyes Foundation, the National Endowment for the Humanities, the Wyoming Office of Manpower Planning; and by more than one hundred and fifty community agencies throughout the West.

WICHE is an Equal Opportunity Employer.

ID 88047182

GV
191.42
.C2
B753
1976

UPPER KLAMATH RIVER RECREATION STUDY

Prepared by: Katherine J. Bridwell
Katherine Bridwell
October 1, 1975

Approved by: Robert E. Fay
Robert E. Fay, Area Manager
January 6, 1976

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

Bureau of Land Management
Library
Denver Service Center

TABLE OF CONTENTS

	Page
Objectives	2
Abstract	3
Introduction	4
Recommendations	6
Recreation Management Plan	7
Site I Environmental Analysis	24
Site II and Site III Environmental Analysis	35
Site IV and Site V Environmental Analysis	42
Land Report	53
Appendix	59
Acknowledgements	85

OBJECTIVES:

The objectives of this intern program were to gather and analyze data and develop a plan for the management of National Resource Lands along a seven mile stretch of the upper Klamath River.

That analysis was conducted in three steps, a portion of which is in accordance with the sponsor's procedures.

The report is broken into three separate parts: A land report, an environmental assessement, and a recreation plan. For clarity, the report is arranged in reverse order, with the plan or proposal being the lead document.

The Land Report is the physical inventory, and is the procedural document used by the sponsor for classifying and earmarking the land for a particular use.

The Environmental Analysis is the segment which alerts the sponsor to any environmental impacts, plus mitigating measures which may be necessary should that agency choose to initiate the proposals of the plan.

The Recreational Plan is the actual action proposal. It points out my ideas on how these parcels should be developed. The plan gives a detailed site improvement concept, and identifies approximate costs to develop those improvements.

The Klamath River is recognized as having unique and outstanding recreational values. It then becomes necessary to zero in and point out which specific parcels are involved.

This document may serve as interim guidelines which will help protect the site until a final decision is made to implement the plan.

ABSTRACT

Five parcels of BLM administered land along the upper Klamath River were evaluated for their recreational potential. The data was compiled into three separate documents: An Environmental Analysis, which gives a complete description of the environment and the anticipated impacts of the proposal; a Land Report which describes the sites in terms of present legal designations, land uses, and potential land uses; and a Recreation Activity Plan which describes the sites more fully in terms of actual recreational uses and development possibilities. These documents will be used by the Bureau of Land Management to begin action for recreation development on these parcels.

INTRODUCTION

This study was initiated because of the recreational potential of several parcels of BLM administered lands along the upper Klamath River. Types of facilities possible and exact location specifications had to be determined. Five parcels of land were evaluated in three documents of BLM format, an Environmental Analysis, a Land Report, and a Recreational Activity Plan.

This area is administered under the Siskiyou Resource Area from the Bureau of Land Management office in Redding, California. The parcels studied are located between Irongate Reservoir and the U.S.F.S. boundary at Ash Creek along the Klamath River. Other land use acquisitions are recommended in this report (Appendix I and II).

The trend along the upper Klamath River is moving more towards recreation, especially since the area is rich in wildlife and has such an excellent steelhead and salmon fishery. Two power generating reservoirs have been constructed on the upper Klamath River at Copco and Irongate, which have increased the amount of vacation use in this area. The American Whitewater Associaiton has rated the Klamath River as excellent in boating quality, relatively easy, and quite scenic. Drift fishing has been popular on the upper Klamath, and rafting and conoeing are increasing in popularity. The 175 miles from Irongate to the Pacific Ocean has been designated a component of the California Wild and Scenic River System, and is under Federal investigation for wild and scenic river determination.

However, developments along the Klamath River are destroying the wild and scenic qualities. In the past, the economy of Siskiyou County has been primarily from grazing, timber production, and mining. Many large ranches have recently been financially pressed to sell their land to large development and land corporations. Much of this land has been and will be subdivided for recreational homes. The most significant development on the upper Klamath, besides the summer homes on Copco Reservoir, is a cooperative recreation ranch called "R-Ranch". It presently owns 5,119 acres, of which some is significant river-front property. R-Ranch began selling shares in 1970, and so far 1,500 shares have been sold. The maximum will be 2,500. Most of the owners are retired people and those with large families from the San Francisco Bay area and Los Angeles. The main attractions are camping, horseback riding, and socializing. R-Ranch will continue to have a significant affect on the area as more owners decide to also build homes in the area. Other major subdivision land companies along the upper Klamath River include Klamath River Estates (Boise Cascade), Central Valley Land Co., Irongate Development Co., and Cascade Shores.

While present public demand on the upper Klamath is not too great, it is likely to increase with the population of Siskiyou County, which is expected to increase 20% from 1970 to the year of 2000. The population trend is toward urbanization, which will probably increase the City of Yreka 80% during the same period. Out-of-the-county recreational use is expected to grow significantly. In the approximately 30 mile stretch of river from Copco to the U.S. Forest Service boundary, only about 3 miles are publicly owned, by the Bureau of Land Management or the California Department of Fish and Game. Presently just two public boat ramp areas exist along the river, at Irongate Dam and on the Fish and Game fishing access at Klamathon. (Appendix III)

RECOMMENDATIONS

(See pictures: Appendices IV, & XII - XV)

1. Site No. I

   Provide better access from the highway, picnic tables and fire pits, plant more trees, and install trash cans, and portable toilets.

2. Site No. II

   Remove occupancy structures, provide parking, picnic tables and firegrills, trash cans, plant trees, and install portable toilets.

3. Site No. III

   Remove occupancy structures, provide picnic tables, parking facilities, fire pits, boat launch, trash cans, and portable toilets.

4. Site No. IV

   Parking area, trail to water, picnic tables, trash cans, fire pits, and portable toilets.

5. Site No. V

   Tables and fire pits, signing, boat ramp, and trail from road.

6. Dry Creeks

   Acquire the parcel along the river from Dry Creek south about 1/3 of a mile. The area is level and above the floodplain and offers an excellent boat launch location. Owner: R-Ranch

7. Copco parcel

   Acquire the parcel along one mile stretch of county road (See Appendix II). This area is quite unique in its rock formations (which have many Indian artifacts) and its abundance of water. The vegetation along the road becomes lush and several waterfalls cascade down from the slope. The land also has lake access, a historical homestead site, and is an excellent location for hiking, as a natural area, picnicking on the lake, and possibly boat launching. Owner: Freeman Major Etal

RECREATION MANAGEMENT PLAN

I. Introduction

In recent years, ranch land along the upper Klamath River has been sold and subdivided, reflecting the increasing popularity of this area for recreation. In past years the lower Klamath was mostly used for recreation, yet the upper Klamath also offers excellent fishing, and a different kind of beauty in its oak woodlands, open range lands, and dry steep canyons.

Pacific Power & Light Company has created two reservoirs on the upper Klamath, one of which has public recreational facilities and allows boating and water-skiing. Land around the other reservoir, Copco Lake, has already been sold to subdivision land companies, except for two small parcels. (See Appendix VII & XI)

On the River, a cooperatively-owned recreational ranch, "R-Ranch", has significant river frontage. Only members and their guests are allowed to use the facilities. (See Appendix V)

About 2 miles of upper Klamath River land is publicly owned, the remaining 30 miles (from Irongate Dam to the USFS boundary) is private land. When most of the river frontage was owned by ranchers, trespassing for fishing, etc., was generally tolerated. However, as development and subdividing continues in this area, there will be fewer places where the public can get access to the river.

The Klamath River from Irongate Dam to the Pacific Ocean has been designated as a component of the California Wild and Scenic Rivers System, and is under Federal investigation for the same designation. The few parcels of public land on the upper Klamath will gain in importance.

A. Purpose and Objectives

The purpose of this study was to recommend specific recreational development on Bureau of Land Management Lands along the upper Klamath River. Five land parcels were determined to have potential for development. The remaining parcels are either landlocked, inaccessible by road, or do not have water access. (See Appendix II)

B. Recommendations and Findings

Site I: Provide turn-outs from the highway, picnic tables and firepits, portable toilets, trash cans, and plant more trees.

Site II: Remove structures, provide parking, picnic tables and firepits, portable toilets, trash cans, and plant more trees.

Site III: Remove structures, provide parking area, picnic tables and firepits, portable toilets, trash cans, and a boat launch ramp.

Site IV: Provide parking area, trail system with picnic tables, portable toilets, trash cans, and picnic area with tables and firegrills.

Site V: Provide a boat launch ramp, a trail, signing, picnic tables and firegrills.

II. Basic Information

A. Physical Profile (SITE I)

1. Non-Living Components

a. Air

Because the site is located in a canyon, it receives little wind except during the winter months. Air quality is generally good in this area because there is little industry, and the surrounding areas receive considerable wind.

b. Temperature

The general climate of this area is separated into four distinct seasons, with winters receiving the bulk of precipitation. Precipitation averages about 25" annually in this area, with about 10" in the form of snow. Summer temperatures may exceed 100 degrees, while winter temperatures commonly go below 28 degrees. The average temperature is 50 degrees. There are about 200 frost-free days a year.

c. Soil Composition

The soil of this site is primarily sand and rock, created from mining activities up the river, and the natural course of the river. It is shallow and low in nutrient.

d. Land-Use Compatibility and Suitability

This area is zoned as A-1 unclassified, and is in low priority for reclassification. The surrounding land along the river is in private residences, and a few small businesses that cater to tourism. The tax rate is $7.43 per $100 assessed value, which is the typical rate for the upper Klamath area. As the site is not much more than a sand bar, timber production and grazing are not suitable. Because of flooding problems, structures would not be suitable.

e. Water

The water of the Klamath River is too polluted for human consumption but is suitable for recreational use. It is high in nutrient and supports the best crop of steelhead and king salmon in California. The mouth of the Shasta River is just above the site, so the water flows swiftly here, and the site is subject to flooding.

2. Living Components

a. Aquatic Plants

The major aquatic plant of the entire Klamath River system is a blue-green algae, Aphanizomenon flos-aquae. No other plants were identified.

b. Terrestrial Plants

Grasses and shrubs dominate the vegetation on this site. Grasses and forbs include: Star thistle (Centaurea solstitialis), sweet clover (Melilotus), wheat grass (Agropyron), mustard (Brassica campestris), spear grass (Stipa), brome grass (Bromus), primrose (Primulaceae), fiddleneck (Phacelia tanacetifolia), pepper grass (Lepidium), squirrel tail (Sitanion Hystrix m buttercup (Ranunculus), medusahead (Taeniatherum Aspecum), cocklebur (Xanthium canadense), mule ears (Wyethia), Kentucky blue grass (Poa pratensis), chicory (Cichorium Intybus), Russian thistle (Salsola Kali), and mullein (Verbascum).

Shrubs include: Buckbrush (Ceanothus cuneatus), rabbitbrush (Chrysthamnus), California wild grape (Vitis californica), Himalaya blackberry (Rubus thyrsanthus), and poison oak (Rhus diversiloba).

Trees are located either at the water's edge or along the highway and include: juniper (Juniperus), Oregon white oak (Quercus Garryana), Oregon ash (Fraxinus Latifolia), California black oak (Quercus Kelloggii), and willow (Salix).

c. Aquatic Animals

The California Protected Waterways Plan (Feb. 1971) of the California Resources Agency, has classified the Klamath and Shasta River, and three upper Klamath tributaries, Bogus Creek, Little Bogus Creek, and Dry

Creek, as Class I premium salmon and steelhead waterways.

Adult king salmon and silver salmon enter the Klamath River from the ocean during the spring and fall of each year. The fall run is presently the most important, beginning in July and peaking in September. The principal spawning areas of the salmon in the Klamath are located between the mouth of the Shasta River and Irongate Dam.

Steelhead are the most common anadromous fish found in the Klamath. While they enter the Klamath throughout the year, there are two main runs, the spring run and the fall-winter run. The winter run receives the most steelhead, peaking in December-January.

Other fish found in the upper Klamath drainage system include: Pacific lamprey, pink salmon, chun salmon, sockey salmon, rainbow trout, brown trout, brook trout, blue chub, Klamath tui chub, Klamath speckled dace, golden sucker, fathead minnow, lost river sucker, shortnose sucker, Klamath small scale sucker, Klamath largescale sucker, white catfish, brown bullhead, green sunfish, pumpkinseed, small and large-mouthed bass, white crappie, yellow perch, riffle sculpin, and Klamath lake sculpin.

Aquatic mammals found on the upper Klamath include river otter and mink.

Aquatic birds observed on the site include great blue herons and seagulls. As the Klamath is within the path of the Pacific flyway, other birds generally found in the area include: mallards, gadwalls, baldpates, American pintails, shoveller, green-winged teal, blue-winged teal, cinnamon teal, woodducks, red-heads, ring-necked ducks, canvasbacks, greater and lesser scaup, American golden-eye, barrows, goldeneye, buffleheads, ruddys, mergansers, Canada geese, blue geese, and white-fronted geese.

d. Terrestrial Animals

Animals observed on the site include black-tailed mule deer, squirrels, western fence lizards, red-winged blackbirds, and various other small birds. Insects include honeybees, bumblebees, yellow jackets, wasps, gnats, misquitos, dragonflies, moths and butterflies. This area borders the known range for mountain lion

bobcat, and coyotes, and is considered within moderate deer range. Birds that may visit the area include: Southern bald eagle (endangered), prairie falcon (rare), American peregrine falcon (endangered), ferruginous hawk, American osprey, and golden eagles.

3. Ecological Interrelationships

a. Succession

Frequent flooding has done much to prevent plant growth on the site. The only trees are up against the highway and as part of the riparian vegetation along the river. Flooding has also prevented much accumulation of organic matter in the soil. This situation will keep the site in a subclimax of primarily shrub.

b. Food and Community Relationships

While the vegetation on the site appears to be sparse, it offers much food in the form of berries, acorns, forbs and leaves, and it is good bird habitat in the riparian trees. Squirrels and birds would probably be important in helping regeneration of plants, except when flooding would wash away the seeds, berries and acorns.

It would be difficult to trace the complete food chain cycle of this site since the area is small and isolated between the highway and the river. The highway is most likely a mortality factor for animals migrating from the hillsides to the site for food and water. Predators that may visit the site include rattlesnakes, coyote, bobcat, mountain lion, hawks, and eagles.

4. Human Values

a. Landscape Character

The predominant landscape feature of this site is the narrow, rugged canyon that the Klamath winds through. The southern side of the canyon has a diversity of vegetation types, colors and shapes, and rock formations.

during the summer when it just looks hot and dry. The fall and spring (prime fishing times) would most likely bring the best color diversity, and cooler, more favorable weather.

b. Socio-cultural Interests

(1) Educational-Scientific

The only educational-scientific significance of the site would be bird-watching.

(2) Cultural-historical

There is no cultural or historical significance of this site or immediate area. The native people that inhabited this area were Shasta Indians. As they dwelled along the Klamath River, it is possible that artifacts may be found on the hillsides.

c. Social Welfare

Recreational facilities invites more tourism in this area and so benefits the local businesses.

d. Local Regulatory Structure

Siskiyou County would be responsible for road maintenance, policing, search and rescue, and possibly trash removal from the site. The City of Yreka has a hospital and ambulance service. There are several private and public telephones in the vicinity. Fire protection would come from the California Division of Forestry.

B. Physical Profile (SITE II AND SITE III)

1. Non-Living Components

a. Air

These sites are located in a narrow canyon and so are somewhat protected from the wind, especially during the summer months. The air quality of this area is good since there is no polluting industry and the surrounding areas receive considerable wind.

b. Temperature

The general climate of this area is separated into four distinct seasons, with winters receiving the bulk of precipitation. Precipitation averages 20" annually, with about 10" in the form of snow. Summer temperatures may exceed 100 degrees, while winter temperatures commonly go below 28 degrees. The average temperature is 50 degrees. There are about 175 frost-free days a year.

c. Soil Composition

Site II soil is sand-rocky loam with heavy metamorphic rock out croppings. The nuturient value is low-moderate. Site III is hilt very rocky loam soil type. The subsoil is heavy stony loam and sits on bedrock. There is a moderate erosion hazard and high natural fertility. The depth of the soil is 18-40".

d. Land-Use Compatibility and Suitability

These sites are zoned under A-1 unclassified, and are in low priority for reclassification. The area in the past has supported mining and minimal grazing, but is mostly too steep for any development, except at Carson and Osburger. The tax rate for Carson Gulch is $7.43 per $100 assessed value, and $7.78 at Osburger. The area is not suitable for any businesses since Anderson Grade Road is not a "passenger" car road, as it is very narrow and rocky.

e. Water

The water of the Klamath River is too polluted for human consumption but is suitable for recreation use. It is high in nutrient and supports the best crop of steelhead and silver salmon in California. King salmon is also significant along this part of the river. The stream flow through both gulches is seasonal, and should not present any threat to site development.

2. Living Components

a. Aquatic Plants

The major aquatic plant of the entire Klamath River System is a blue-green algae, Aphanizomenon flos-aquae. No other plants were identified.

b. Terrestrial Plants

The vegetation on Site II consists mostly of grasses and shrubs, with few trees. Site III has a diversity of vegetation ranging from grassy open areas to broadleaf and coniferous trees.

Grasses and forbs common to both sites include: Star thistle (Centaurea solstitialis), medusahead (Taeniatherum asperum), cheat grass (Bromus secalinus), Cocelbur (Xanthium canadense), and mullein (Verbascum).

Common shrubs include: Himalaya blackberry (Rubus thyrsanthus), California wild grape (Vitis californica), and skunkbush (Rhus trilobata).

Common trees include: Willow (Salix), and juniper (Juniperus).

Site II Grasses and forbs: Alfalfa (Medicago sativa), sour dock (Rumex crispus), primrose (Primulaceae), mustard (Brassica campestris), Russian thistle (Salsola kali), yarrow (Achillia millefolium), and blue dicks (Brodiaea capitata).

Shrubs: Gooseberry (Ribes)

Site III grasses and forbs: Needle and thread grass (Stipa comta), salt grass (Distichlis spicata), sweet clover (Melilotus), tuffed hairgrass (Aira caespitosa), annual fesue (Festuca) milkweed (Asclepias), sunflower (Helianthus), goldenrod (Solididago), wooly lupine (Lupinus).

Shrubs: Rabbitbrush (Crysolthamnus), poison oak (Rhus diversiloba).

Trees: Oregon white oak (Quercus garryana), tree of heaven (Ailanthus glandulosa), ponderosa pine (Pinus Ponderosa), and fruit trees - pear, apple, apricot and plum.

c. Aquatic Animals

The California Protected Waterways Plan (Feb. 1971) of the California Resources Agency, has classified the Klamath River, Shasta River, and three upper Klamath tributaries, Bogus Creek, Little Bogus Creek, and Dry Creek, as Class I premium salmon and steelhead waterways.

Adult king salmon and silver salmon enter the Klamath River from the ocean during the spring and fall of each year. The fall run is presently the largest, beginning in July and peaking in September. The principal spawning areas of the salmon in the Klamath are located between the mouth of the Shasta River and Irongate Dam.

Steelhead are the most common anadromous fish found in the Klamath. While they enter the river throughout the year, there are two main runs, the spring run and the fall-winter run. The winter run is the largest, peaking in December-January.

Other fish found in the upper Klamath drainage system include: Pacific lamprey, pink salmon, chun salmon, sockeye salmon, rainbow trout, brown trout, brook trout, blue chub, Klamath tui chub, Klamath speckled dace, golden sucker, Klamath smallscale sucker, Klamath largescale sucker, white catfish, brown bullhead, green sunfish, pumpinseed, small and large-mouthed bass, white crappie, yellow perch, riffle sculpin and Klamath Lake sculpin.

Aquatic mammals found on the upper Klamath include river otter and mink.

Seagulls and great blue herons were observed on the sites. As the Klamath is within the path of the Pacific Flyway, other aquatic birds generally found in the area include: mallards, gadwalls, baldpates, American pintails, shoveller, green-winged teal, blue winged teal, cinnamon teal, wood ducks, red-heads, ring-necked ducks, canvasbacks, greater and lesser scaup, American golden-eye, barrows golden-eye, bufflehead, ruddys, mergansers, Canada geese, snow geese, blue geese, and white-fronted geese.

d. Terrestrial Animals

Animals observed on the site include black-tailed mule deer, raccoon, squirrels, western fence lizards, and numerous small birds. Insects include mosquitos, gnats, honey bees, bumble bees, yellow-jackets, wasps, butterflies, moths, and dragon flies. Birds that were observed in the area include bald eagles (endangered), golden eagles, ospreys, and redtailed hawks. Others that may visit the area include American peregnine falcon (endangered), and prarie falcon (rare).

3. Ecological Interrelationships

a. Succession

Both of the sites are affected by the water systems, human structures, sandy and shallow soils, and a climate that is dry and hot for most of the summer months. Ponderosa pine is the climax vegetation type for the area, but its abundance is scarce except where there are shaded canyons and deeper soils with more moisture.

The subclimax at Site II is primarily shrub because of its dry, open exposure, soil composition, grazing and erosive factors. Site III has some Ponderosa pine, but is mostly an oak subclimax, and grassland where disturbed by man.

b. Food and Community Relationships

The hillside above the sites is part of the ecosystem of the sites, which are a source of food (from the grasses and forbs, berries, acorns and leaves) and water. Since the areas are presently little disturbed by man, animals can use them at any time. Natural rock shelters on the hillsides provide protection for animals (and occasionally man, as evidenced by signs of fire). Grazing by cattle is most likely in conflict with deer usage on the sites.

4. Human Values

a. Landscape Character

Site II has a couple of trees, but is mostly open and monotonous looking. The hillside above the site offers more of a diversity of vegetation. Unfortunately, Interstate 5, just across the river, really detracts from the aesthetics of the area by both the noise and sight of the automobiles and trucks. The URA has classified the site as "C" in the scenic categories, which means moderate variety in topography, vegetation and/or water bodies.

Site III has a variety of vegetation and densities, offering a range of color and shape. The site is large enough to accommodate both private and open space areas. Again, the highway detracts from the site, although the riffle below the site helps block the noise. The hillside up the gulch has interesting hiking through Ponderosa pine and sandstone rock formations.

b. Soci-cultural Interests

(1) Educational-Scientific

This area is good for wildlife study, especially bird watching.

(2) Cultural-Historical

Anderson Grade Road is a historical road (built by prison labor) that starts in Yreka and joins with the California-Oregon state road at a site on the river that was at one time Anderson's Ferry. While there is no particular historical significance of the actual sites, they are very close to Klamathon. Klamathon was originally called Pokegama, until 1897, when the name was

changed to Klamathon. It was a thriving town of 500 inhabitants and over 100 buildings. A long chute was constructed above Shovel Creek, on the Klamath. Logs cut in Oregon were taken to the top of the ridge and dropped down the chute, 835 feet to the river. They were then floated down to the sawmill at Klamathon, and shipped south by rail. Klamathon was destroyed by several fires and business problems. Today just 5 houses remain. The pilings from the fish ladder and sawmill can still be seen in the river.

The native people that inhabited this area were the Shasta Indians. As they lived along the river, it would be possible to find artifacts on the hillsides.

(3) Social Welfare

Additional recreation facilities will help make the upper Klamath more accessible to the public, and therefore more desirable for recreationers. This would economically benefit the local businesses, especially in the Hornbrook area.

(4) Local Regulatory Structure

Siskiyou County would be responsible for road maintenance, policing, search and rescue, and possibly trash removal from the sites. The City of Yreka has a hospital and ambulance service and there are public telephones at Collier's Rest Area. Fire protection would come from the California Division of Forestry.

C. Physical Profile (SITE IV AND SITE V)

1. Non-living Components

a. Air

Winds increase in the late afternoons in this area, and become heaviest during the winter months. In general, the air quality of the area is very good as there is no polluting industry and winds keep the air circulated.

b. Temperature

The climate of this region is separated into four distinct seasons, with winters receiving the bulk of

precipitation. Precipitation averages 16-20" annually, with about 10" in the form of snow. Summer temperatures may exceed 100 degrees, while winter temperatures commonly go below 28 degrees. The average temperature is 50 degrees. There are about 125-150 frost-free days a year.

c. Soil Composition

Both sites have a Lassen stony-clay soil type. The surface is stony clay and the subsoil stony or cobbly clay. The depth is 20"-40". The erosion hazard is moderate to severe. The soil on the north side of Site V is very cracked and eroded and low in fertility. The south side of the site and Site IV have moderate fertility. There are severe limitations on septic tank construction due to the shallow depth and structure of the soil.

d. Land Use Compatibility and Suitability

The land is capable of supporting both wildlife and recreational use. It is not suitable for timber production because it is not forested, or for grazing because of poor soil quality and high erosive factors. The area has land that has been subdivided for home development. However, a lack of water and interest in this area have prevented much development on Irongate Reservoir. This area is zoned as A-1 unclassified and is in low priority for reclassification. The tax rate is $7.43 per $100 assessed value, which is the typical rate for the upper Klamath lands.

e. Water

The water of Irongate Reservoir is too polluted for human consumption, but is suitable for recreational use (see Aquatic Plant below).

2. Living Components

a. Aquatic Plants

The major aquatic plant of the entire Klamath River System is a blue-green algae, Aphanizomenon flos-aquae. It becomes quite dense during the summer months and is a distracting nuisance to recreationers. While the algae problem has been studied for years by several agencies in both Oregon and California, no feasible solutions have yet been recognized. Until it is resolved, the algae will continue to be a hindrance on recreational use.

b. Terrestrial Plants

Grasses and forbs at Site IV include star thistle (Centaurea soltitialus), medusahead (Taeniatherum asperum), cheatgrass (Bromus secalinus), ripgut (Bromus rigidus), cocklebur (Xanthium canadense), mustard (Brassica), buckwheat Polygonaceae), sour dock (Rumex crispus), primrose (Primulaceae), lupine (Lupinus), mullein (Verbascum), and yarrow (Achillea millefollium),

Shrubs at Site IV include bitterbrush (Purshia tridentata), and rabbit-brush (Crysothamnus). Trees include Oregon white oak (Quercus garryana), and willow (Salix).

Grasses and forbs at Site V include sour dock (Rumex crispus), cocklebur (Xanthium canadense), mustard (Brassica), star thistle (Centaurea solstitialis), and medussahead (Taeniatherum aspercum).

Site V shrubs: Buckbrush (Ceanothus cuneatus), rabbit-brush (Crysothamnus) and smooth sumac (Rhus glabra). Trees include juniper (Juniperus), and Oregon white oak (Quercus garryana).

c. Aquatic Animals

The dominant fish species of the lake include yellow perch, green sunfish, white crappie, small and large-mouth bass.

Because the Klamath River system is along the Pacific Flyway, waterfowl that may be found on the lake include seagulls, great blue heron, mallards, gadwalls, baldpates, American pintails, shoveller, green-winged teal, blue-winged teal, canvasbacks, greater and lesser scaup, American golden-eye, buffleheads, ruddys, mergansers, Canada geese, snow geese, blue geese, and white-fronted geese.

d. Terrestrial Animals

Animals observed at Site IV include squirrels, black-tailed mule deer, black-tailed hare, western fence lizards, gophers, red-tailed hawks, magpies, and numerous small birds. Other birds generally seen in the area include ospreys, golden eagles, and bald eagles (endangered). Insects observed at both sites include honeybees, bumble bees, yellow-jackets, mosquitos, gnats, dragonflies, butterlies and moths. Animals observed at Site V include lizards and black-tailed mule deer, but the area is also within mountain lion, bobcat, and coyote range.

3. Ecological Interrelationships

a. Succession

Oak woodland is the climax of Site IV. Except where erosion from the road occurs, oaks are abundant, with an understory of mainly grasses. The north side of Site V is dominated by star thistle and juniper, as the area is heavily eroded, very rocky, and not likely to support other vegetation. The south side has an oak woodland climax, much similar to Site IV.

b. Food and Community Relationships

The oaks on Site IV support squirrels, while the bitter-brush and rabbit-brush attract deer. Deer are only visitors to the area, as it is isolated between the lake and the road. Hawks and eagles may be assumed to be the primary preditors on this site.

The abundance of star thistle on both sites is quite beneficial to honeybees.

Site V is on the edge of wintering deer range. The north side is probably only occasionally visited because the area is steep, quite rocky, and isolated between the lake and the road. The south side is less disturbed, but the surrounding hillsides offer marginal forage for deer. The site is most likely visited by coyote, bobcat, and mountain lion, as well as hawks and eagles.

4. Human Values

a. Landscape Character

Both site areas have a scenic rating of "B", which means excellent variety in topography, vegetation and/or water bodies. Half of the large knoll on Site IV has been cut away for gravel mining, and left quite unattractive. The view from the water's edge as well as the top of the knoll of the surrounding mountains is particularly striking. The north site of Site V has a feeling of spaciousness that contrasts with the narrowing canyon of the lake. From a distance the star thistle makes a harmonious blanket of yellow (when in bloom) that contrasts with the dark green juniper. However, when the star thistle is in bloom, the site is almost impenetrable on foot. The south side of the site is hilly and shaded from the many oak trees. It offers more privacy than the north shore.

b. Socio-cultural Interests

(1) Educational-Scientific

Both sites may be used by naturalists for watching and studying wildlife.

D. Recreation Resource Inventory and Evaluation

Of the three sites along the river, Site III has the best recreational potential. Site I is on a flood plain, and Site II is a small area that is quite rocky, not very attractive, and noisy from Interstate 5 just across the river. Site III is a larger area that offers more of a diversity in vegetation and topography, and is the most suitable for developing a boat launch area.

Site IV on Irongate Reservoir follows the shoreline for about 2/3 of a mile and has several recreational potentials. While just day use had been proposed, a campground is also possible. The P.P. & L. water access area that is adjacent to BLM land would be greatly improved by the addition of picnic facilities on the BLM land. The sloping hillside to the water has several mature oaks and would also make a good picnic area.

The north side of Site V is not suitable for development because the soil is so heavily eroded and unstable. The south side of the site is accessible only by boat or foot, but makes an excellent location for camping because of the stand of mature oak trees and the privacy of the area.

E. Visitor Use Analysis

Little data is available on the overall visitor usage of this area. Pacific Power and Light Company has recorded the usage on Irongate Reservoir, and the USFS has information on usage at their "Tree of Heaven" campground which is about four miles west of Site I. Visitors at Tree of Heaven have increased only slightly over the past few years, while Irongate Reservoir shows a more significant increase. (See Appendix VI)

F. Demand Analysis

The population of Siskiyou County is expected to increase in the near future, with a trend toward urbanization. (See Appendix VIII) Subdivisions along the upper Klamath, plus the increased population of the county, will most likely increase the demand on the upper Klamath River for recreation.

Most of the one-day users of the area are local or regional residents, but about 71% of the overnight visitors are from outside of the area. Both categories can be expected to increase in the near future.

G. Inventory and Evaluation of Factors Affecting Recreational Use

Site I has the best access of the five site areas. Sites II and III are accessible from Anderson Grade Road, which is a rough, narrow dirt road. Access to Site IV is from a county-maintained improved dirt road. Access to Site V is either by boat, or hiking from a dirt road.

At Site I, the major conflicting use is cattle grazing, and at II and III it is cattle grazing and the occupancy trespasses. At Sites IV and V there are presently no conflicting uses of the land.

The subdivision development on the upper Klamath is in conflict with the wild and scenic qualities of the river.

H. Land Status

Refer to Land Report.
For current land ownership, see Appendix IX.

III. Management Plan

A. Management Zones

Each site would be classified under "Recreation Development Zone", except the north half of Site V, which would be an "Open Space Zone".

B. Resource Management

The general management theme for these sites is to maintain and enhance the natural aesthetics of the areas, while providing minimal recreational development. All developments should be of a primitive or simple nature, using the natural environment as much as possible.

Tables should be few at the sites and firepits should be made of stone. Stand up firegrills are more appropriate for the lake sites. All roads and parking areas should be dirt, except for gravel on the boat launch ramps. Toilets should be portable so they can be removed in the event of flooding, and so the sites can be rearranged. All planted vegetation should be native to the area.

C. Visitor Management

1. Public Contact and Information

The public can become informed of these developments through the following agencies: BLM office in Redding, BLM maps, Yreka Chamber of Commerce, Automobile Club, Pacific Power and Light Company, and possibly the USFS in Yreka. Signing the sites would also be helpful.

2. Interpretive Plan

Historical and cultural information is more general for the area rather than significant on the specific sites. The county museum in Yreka has complete information to offer visitors.

3. Visitor Protection

In general, protection such as policing and search and rescue are provided by Siskiyou County. Fire protection is from the California Division of Forestry. There are public and private phones available near the sites, and there is a hospital and ambulance service in Yreka.

D. Multiple Use Management

With recreation development zoning, restrictions would be on mining, grazing, timber production, and commercial uses. Recreation, wildlife, and watershed protection would be the favored uses.

IV. General Development Plan

The first development priorities on the sites should include: Removing occupancy structures, providing signing, trash cans, parking, and toilets. All the sites except for II and III (with structures) would be ready for use in a short time period. The next priorities should include: Providing picnic tables, firepits, and planting of vegetation. Lastly the trails and boat ramps should be completed. Costs of these developments are shown in Appendix X.

General site plans are shown on the following pages.

SITE I ENVIRONMENTAL ANALYSIS

I. Description of Proposed Action and Alternatives

The proposed action is the development of an outdoor recreational area for picnickers and fishermen. This proposal allows for access from the highway, planting of native trees, and providing picnic tables, firepits, trash cans and portable toilets.

A. Background Data

This area is located along the Klamath River, just west of the mouth of the Shasta River, and three miles east of the U.S. Forest Service boundary at Ash Creek, in the NE¼, Section 24, T. 46 N., R. 7 W., M.D.M. The area was located by a 15' topographic map of Hornbrook, California.

The site is about one half mile long and 60-125 feet wide, from the highway to the river. The river at this point is in a steep and narrow canyon, with a slope of about 35-45 degrees. It is an open dry area that receives little breeze and is lacking in shade. It is on the flood plain of the river, and is washed-over too often to make much structural development feasible. The river flows too swiftly by the site for swimming or boat launching to be desirable. The site is presently used by occasional campers and more heavily by fishermen during the peak of the fish runs. Litter is a problem near the turn-off from the highway.

The site is just west of the beginning of Highway 96, which borders the Klamath, and is a gateway to several recreational areas, including the Marble Mountain Wilderness and the Pacific Coast. The USFS maintains a campground at Humbug Gulch, about four miles west of the site, which offers fresh water, toilets, designated campsites and a boat launch ramp. Usage at the campground is not great except during the peak of the fish runs. Most of the year-around users are just traveling through the area. Its close proximity to Interstate 5 makes it accessible as an overnight area for travelers going north or south. Use has increased only slightly in the last couple years. About four miles east of the site is Collier's Rest Area, which provides tables, toilets and water, but no overnight facilities.

B. Action Purpose

The purpose of this action is to recommend the development of a picnic and river access area for fishermen and other recreationers, that would provide picnic tables, firepits, toilets, parking and access from the highway, and maintenance and trash removal.

C. Available Alternatives

1. Overnight Campsite Development

Overnight development would require filling the area with a considerable amount of soil, and engineering the river bank to minimize flood damage.

2. No Action

The no action alternative would leave the present problems of littering and low year-around use because the site offers no facilities and is unattractive for the potential of the area.

D. Action Component

The stages of implementation include: Turn-off construction and parking, planting, picnic area construction, maintenance and use. The discrete operations are:

1. Constructing the turn-offs
2. Clearing parking area
3. Tables, firepits, and toilets
4. Planting trees
5. Maintenance
6. Use

II. Analyzing Proposed Actions and Alternatives

A. Environmental Impacts

1. Anticipated Impacts

a. Air

Trees would reduce wind on the site and moderate temperatures, as well as add oxygen to the air.

b. Land

More trees would help the soil accumulate organic matter and would slightly help solidify the soil in the event of flooding.

c. Water

The proposed development would have no significant impact on the river, but usage of the area may. There is a possibility of people allowing soap, car oil, or other pollutants to enter the river.

d. Aquatic Plants

The impact on the aquatic plants would be insignificant unless usage of the area greatly polluted the water.

e. Terrestrial Plants

As mentioned previously, planting more trees would benefit the soil, as well as add diversity and shade. Added soil nutrient and shade would benefit the growth of other vegetation, Grasses and forbs will be trampled in parking areas and other areas of use.

f. Aquatic Animals

Human usage of the area will discourage use by aquatic birds.

g. Terrestrial Animals

While more trees would provide more wildlife habitat, more human usage would tend to frighten many animals from using the site.

h. Ecological Processes

As the highway presently disrupts many animal processes on the site, more parking and human usage will further have an affect. Both animal and soil processes would be benefited by more dense vegetation cover and trees.

i. Landscape Character

Trees would do much to improve the monotony of the site. A maintenance program would help alleviate the litter problem.

j. Sociocultural Interests

The impact would be slightly beneficial to the local businesses, and beneficial to the general public who would use the site.

k. Attitudes and Expectations

Local residences and visitors to the area are interested in more river frontage public-use areas, to prevent private land trespass on the upper Klamath.

2. Possible Mitigating or Enhancing Measures

None

3. Recommendations for Mitigation or Enhancement

None

4. Residual Impacts

Residual impacts may result from regular highway maintenance next to the site.

5. Short-Term Use vs. Long-Term Productivity

To improve the turn-outs from the highway, some machinery will be necessary that will create extra noise and air pollution on the site. Planting trees will effect the vegetation on a long-term basis.

6. Irreversible and Irretrievable Commitment of Resources

None

III. Persons,Groups, Government Agencies Consulted

U. S. Forest Service - Oak Knoll Station
Millard Coots - Department of Fish and Game, Redding
Ed Anderson - Soil Conservation Service, Yreka
D. A. Gravenkamp - Public Works Director, Siskiyou County
Chris Sellman - Siskiyou County Museum
Dave Rogers - Department of Fish and Game, Yreka
County Assessor Office and Planning Commission

IV. Intensity of Public Interest

At this time public pressure is not great on this area except during the peak of the fish runs. Otherwise the area is used mostly by travelers going west on Highway 96, or taking a break off Interstate 5.

V. Staff Participation

Robert Fay
Bert Hart
Steve Tarnay
George Clarke

VI. Environmental Statement Recommendation

The proposal is for minimal development to preserve the natural qualities of the area. There are no significant impacts anticipated, therefore an environmental impact statement is not recommended.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ENVIRONMENTAL ANALYSIS WORKSHEET

1. Action: The proposed action is to develop a picnic and river access area for fishermen and other recreationers

2. Stages of implementation: Vegetation Changes | Construction | Maintenance and Use

3. DISCRETE OPERATIONS: Plant trees; Road access & parking; Tables and firepits; Maintenance; Use; Portable toilets

4. COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	5. ANTICIPATED IMPACTS						6. REMARKS
I. NONLIVING COMPONENTS							
A. AIR							
Movement	L	0	0	0	0	L	
Temperature	+L	0	0	0	0	0	
Pollution/part. matter	0	0	0	0	0	0	
B. LAND							
Soil Depth	X	0	0	0	0	0	
Structure	+L	0	0	0	0	0	
Nutrient	+L	0	0	0	0	0	
Erosion	+L	-L	0	0	0	0	
Land-use capacity	X	L	+M	+M	+M	L	
Land-use suitability	+M	L	+M	+M	+M	0	
Pollution/littering	0	0	-L	+M	-L	0	
C. WATER							
Quality	0	0	0	0	-L	0	Possibly some pollution
II. LIVING COMPONENTS							
A. PLANTS *(Aquatic)*							
	0	0	0	0	0	0	

(Continued on reverse)

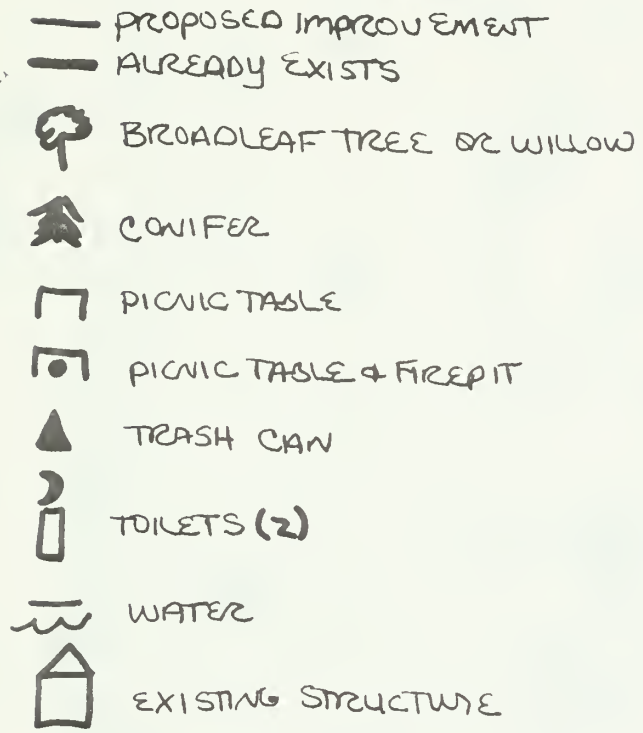
DISCRETE OPERATIONS	Plant trees	Road access & parking	Tables & firepits	Maintenance	Use	Portable toilets	
COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	**ANTICIPATED IMPACTS**						**REMARKS**
II. LIVING COMPONENTS (Con.)							
B. PLANTS *(Terrestrial)*							
Grasses and Forbs	-L	-L	-L	-L	-L	0	
Shrubs	0	0	0	0	0	0	
Trees	0	0	0	0	0	0	
C. ANIMALS *(Aquatic)*							
Fish	0	0	0	0	0	0	
Birds	+M	0	0	0	-L	0	
D. ANIMALS *(Terrestrial)*							
Mammals	+L	-L	L	0	L	0	
Birds	+M	0	0	0	0	0	
Reptiles & Amphibians	+L	-L	+L	0	L	0	
Insects	+L	0	+L	0	L	0	
Man	+M	+M	+M	+M	+M	+M	
III. INTERRELATIONSHIPS							
A. ECOLOGICAL PROCESSES							
Succession	+M	-L	-L	0	-L	0	
Food Relationships	+M	-L	-L	0	-L	0	
Community Relationships	+M	-L	-L	0	-L	0	
IV. HUMAN VALUES							
A. LANDSCAPE CHARACTER							
Harmonious	+H	-L	L	+M	M	L	
Accentuating	+H	-L	L	+M	M	L	
B. SOCIOCULTURAL INTERESTS							
Local Regulatory Structure	0	0	0	0	L	0	
Educational-Scientific	+L	0	0	0	0	0	Increase bird habitat-More bird watching
Cultural-Historical	0	0	0	0	0	0	
Social Welfare	+L	+L	+L	+L	+L	H	
Attitudes & Expectations	+M	+M	+M	+M	+M	L	

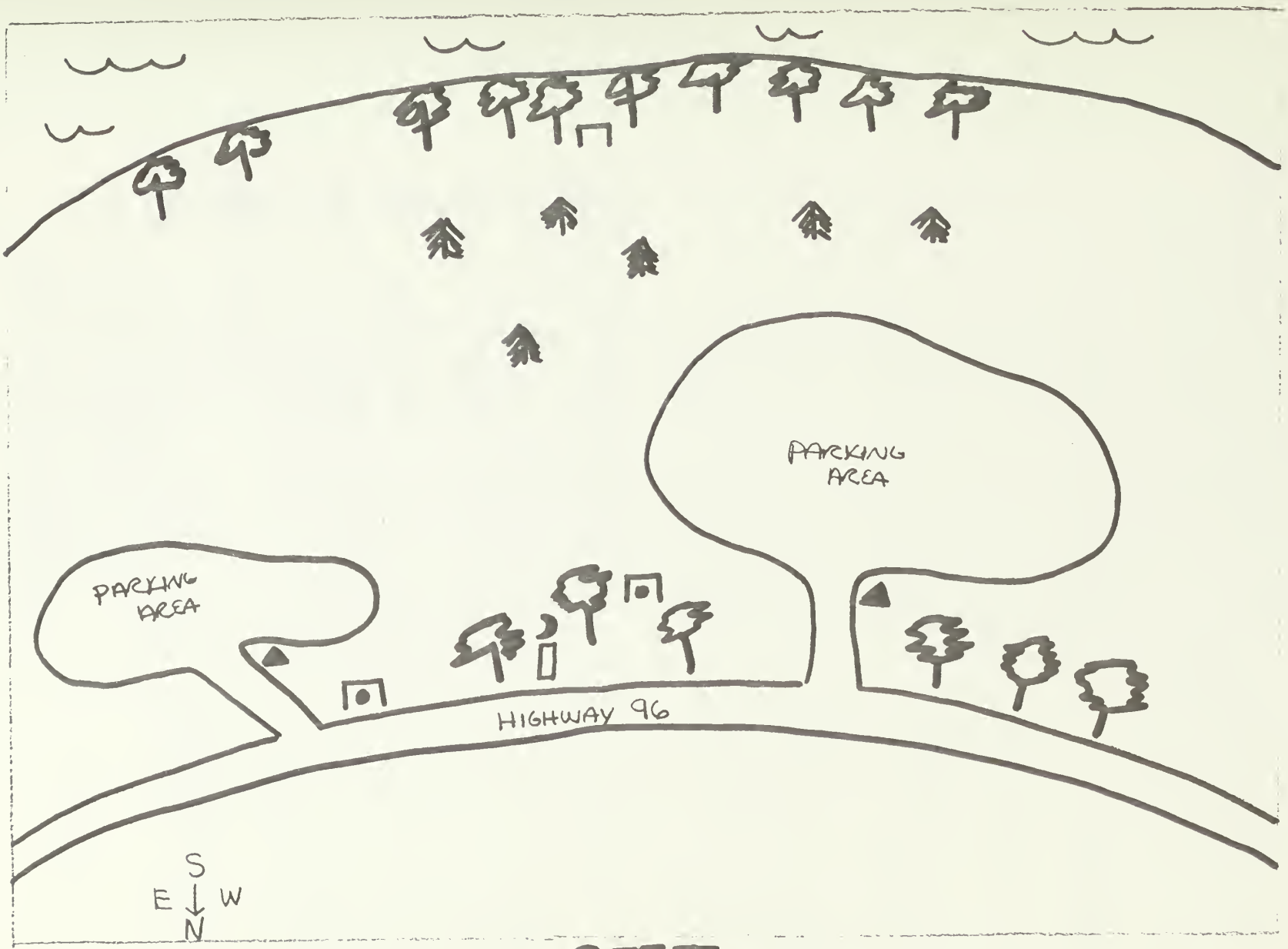
INSTRUCTIONS

1. *Action* – Enter action being taken, analytic step for which worksheet is being used, environmental viewpoint of impact, and any assumptions relating to impact.
   a. Worksheet is normally used to analyze *"Anticipated Impacts"* of action; *however*, it may be used to analyze *"Residual Impacts."* Worksheets may also be used to compare impacts before and after mitigating measures are applied.
   b. State viewpoint that best describes environmental impact. For example, a fence viewed down the fence line has greater impact than the same fence viewed over an entire allotment. Generally, narrow viewpoints better illustrate specific impacts than will broad viewpoints.
   c. Assumptions may be made to establish a base for analysis *(e.g. estimated time periods, season of year, etc.)*.
2. *Stages of Implementation* – Identify different phases of proposed project *(e.g. a road project consists of survey, construction, use, and maintenance stages)*.
3. *Discrete Operations* – Identify separate actions comprising a particular stage of implementation *(e.g. the construction stage of the road project has the discrete operations of clearing, grading, and surfacing)*.
4. *Elements Impacted* – Enter under appropriate heading all environmental elements susceptible to impact from action and alternatives. Relevant elements not contained in the digest should also be entered. See BLM Manual 1791, Appendix 2, Environmental Digest.
5. *Anticipated Impact* – Evaluate anticipated impact on each element and place an entry in the appropriate square indicating degree of impact as low (L), medium (M), high (H), no impact (O), or unknown or negligable (X). Preceed each entry by a plus (+) or minus (-) sign indicating a beneficial or adverse type of impact. If type of impact reflects a matter of opinion or is not known, *do not* preceed with a sign. For example, construction of a wind mill on open range has a definite visual impact; *however*, to some people the effect is detrimental while to others it is an improvement. By not entering a plus (+) or minus (-) sign the worksheet is kept factual and unbiased. If both degree and type of impact are unknown, place an (x) in the appropriate square.
   a. The measures of impact *(e.g. low, medium, and high)* are relative and their meaning may vary slightly from action to action. The term *"low"* should not be applied to impacts of a negligible nature. For example, we know that a pickup truck driving down a proposed fence line laying wire has some impact on air quality. However, the significance of this impact is not normally great enough to warrant even a *"low"* rating. In cases like this, the impact will usually be marked *"O"* or the element left off the worksheet.
   b. It is recognized that some environmental elements may defy accurate measurement or in-depth analysis within current Bureau capabilities or expertise. The nature of the action as well as type and degree of impact should guide in the decision to seek outside expertise or assistance.
6. *Remarks* – Enter clarifying information.

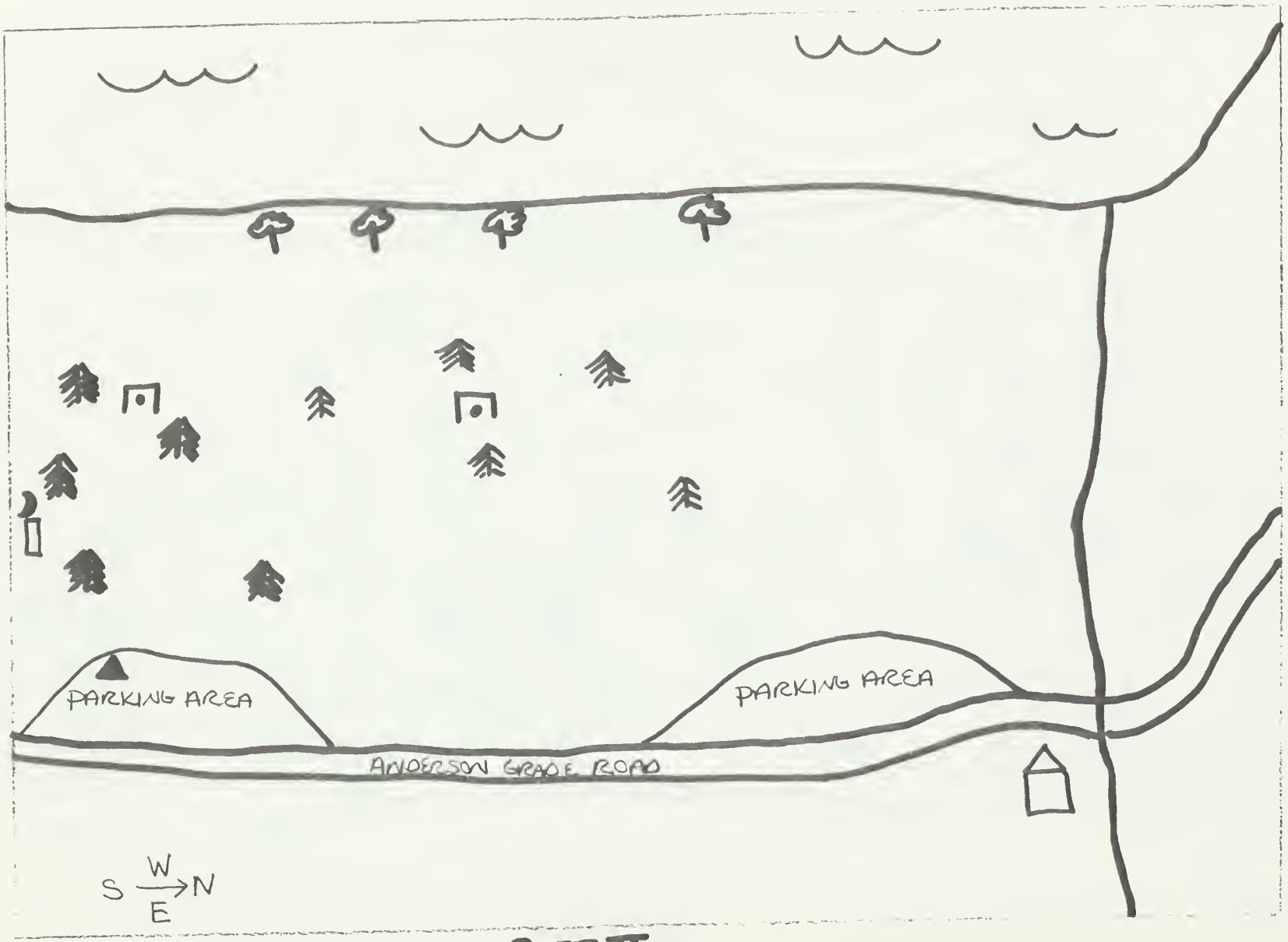
GPO 857 - 541

KEY FOR SITE DIAGRAMS

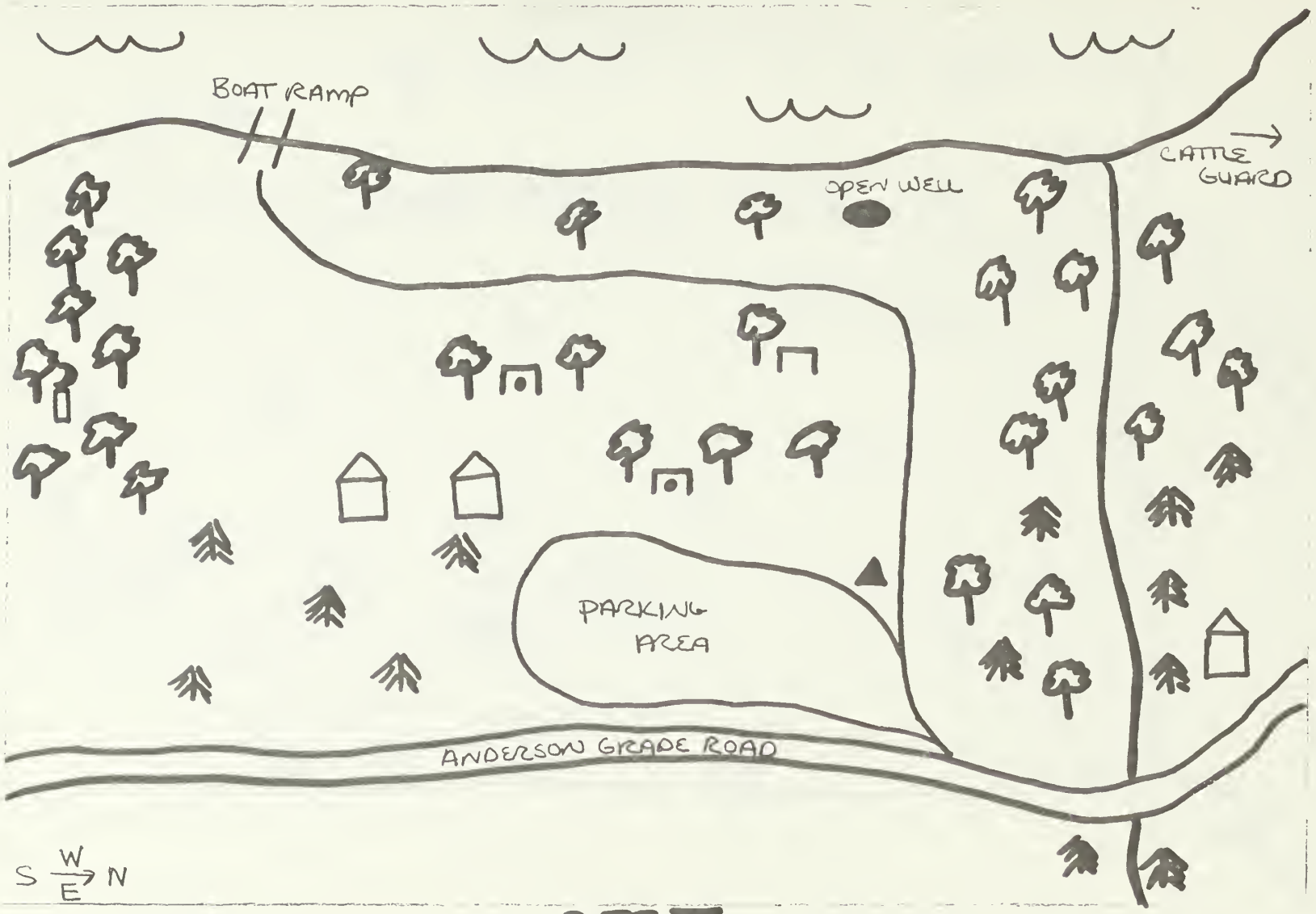




SITE I

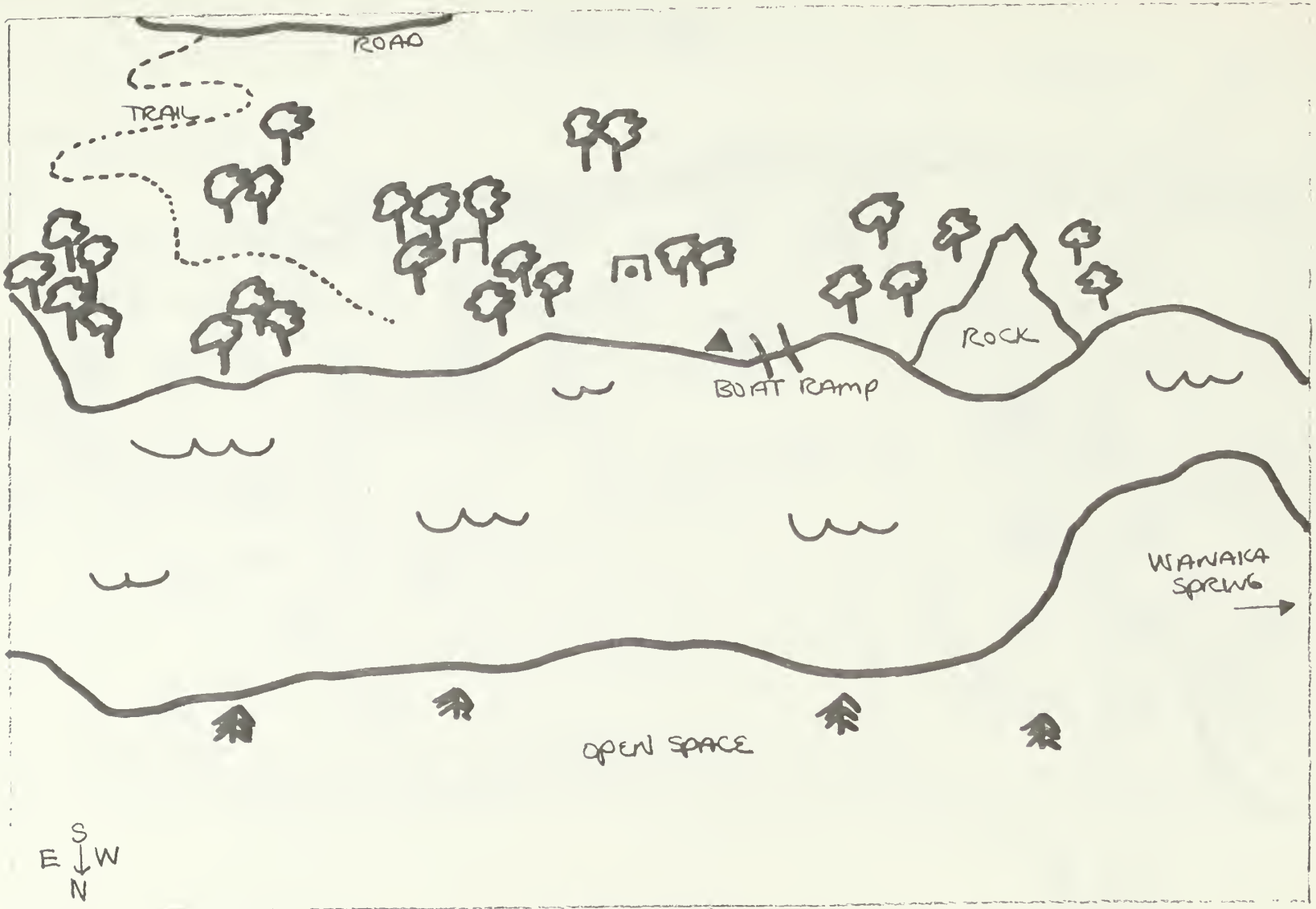


Site II


BOAT RAMP
OPEN WELL
CATTLE GUARD
PARKING AREA
ANDERSON GRADE ROAD
S W E N

SITE III

SITE III
N
E
S
W
COASTAL ROAD
PARKING AREA



SITE V

SITE II AND SITE III ENVIRONMENTAL ANALYSIS

I. Description of Proposed Action and Alternatives

The proposed action is to provide two picnic and river access areas for public use. The proposal for Site II includes removing the structures, planting more trees, providing a few picnic tables and firepits, parking areas and signing, comfort stations and maintenance. The proposal for Site III includes removing the structures, providing tables and firepits, parking and signing, a boat ramp comfort stations, and maintenance.

A. Background Data

Site II is located at Carson Gulch, in the NW¼SE¼, Section 5, T. 46 W., R. 6 W. Site III is located about one mile north of Site II at Osburger Gulch, in the SE¼SE¼, Section 32, T. 47 W., R. 6 W. Both sites are accessible from Anderson Grade, a county maintained one lane dirt road that is accessible from Collier's Rest Area, off Interstate 5, and Copco Road, east of Hornbrook. The sites were located by a 15 min. topographic map of Hornbrook, California and County Assessor's maps. Both sites presently have an occupancy trespass.

Site II is about 800 feet long and 250-300 feet wide, from the road to the water. A seasonal stream comes through the gulch to the river, creating a wider channel at the mouth. The site is otherwise on two levels, both rocky, with the lower one on the floodplain. Site III is about 800 feet long and 300 feet wide, from the road to the water. It also has a seasonal stream coming through the gulch. The site is on several different levels, offering a more diverse setting.

The land along this stretch of the river has been used primarily for mining and limited grazing since the banks are mostly too steep for development. The present occupancy trespass on both sites inhibits potential recreation users.

B. Action Purpose

The purpose of this action is to recommend picnic facilities for public use at two site, with a boat launch ramp at one of the sites.

C. Available Alternatives

Site II:

1. Overnight campsite development

This site doesn't provide much space for camping facilities, nor does it have the aesthetic appeal to attract campers. Collier's Rest Area is about one-half mile away, and it provides restrooms and drinking water.

SITE III:

1. Overnight Campsite Development

This site is not very accessible to the public, but it does provide adequate space for a few campsites. Collier's Rest Area is about 1-1/2 miles away.

BOTH SITES:

2. No Action

The no action alternative would not benefit the public since there are so few public river access areas on the upper Klamath.

D. Action Component

For Site II, the stages of implementation include: Removing the structures, planting, picnic facilities, parking construction, maintenance and use. The discrete operations are:

1. Removing structures
2. Planting trees
3. Picnic tables and firepits, and toilets
4. Signing and parking
5. Maintenance and use

For Site III, the stages of implementation include: Removing the structures, picnic facilities, boat launch and parking construction, maintenance and use. The discrete operations are:

1. Removing structures
2. Picnic tables, firepits, and toilets
3. Signing and parking
4. Boat launch access road and ramp
5. Maintenance and use

II. Analyzing Proposed Actions and Alternatives

A. Environmental Impacts

1. Anticipated Impacts

2. Non-Living Components

a. Air

The impact on the air would be insiginificant.

b. Land

More trees on Site II would help protect the soil from erosion and add nutrients through organic matter.

c. Water

The proposed development would have no significant impact on the water but usage of the area may. There is a possibility of people allowing soap, car oil, or other pollutants to enter the river.

B. Living Components

1. Aquatic Plants

The impact on aquatic plants would be insignificant unless usage of the area created a large water pollution problem.

2. Terrestrial Plants

Removal of the structures and the prevention of cattle grazing will benefit plant succession. More nutrient in the soil by the addition of more trees, will also benefit succession. Some trampling ofgrasses will occur, especially near the boat ramp at Site III.

3. Aquatic Animals

The impact on aquatic animals would be insignificant unless users of the site greatly polluted the water.

4. Terrestrial Animals

Besides the direct fear of man, animals would be little affected by this proposal. An exception would be the destruction of habitat for those animals inhabiting the structures.

C. Ecological Proccesses

Human usage of the sites may have the affect of limiting some wildlife use to certain times of the day or season. Trees can provide more wildlife habitat to the sites. Providing firepits will prevent campfires on the ground that could be destructive. Grasses would be most affected because of trampling. Increased usage of Anderson Grade Road would most likely cause an increase in ground squirrel mortality.

D. Landscape Character

The addition of trees at Site II would do much to improve the aesthetics of the landscape, as well as provide shade and some privacy from Interstate 5. While the present structures

at Site III are very old and picturesque, they can only be appreciated from a distance. Minimal development will enhance the natural attractiveness of the sites by giving them more unity of character.

E. Sociocultural Interests

This action would make these sites along the river accessible for recreation and nature study. The tourism would be economically beneficial to the local businesses.

F. Possible Mitigating or Enhancing Measures

After the structures are removed at Site III, planting Ponderosa pine would improve the aesthetics of the area.

G. Recommendations for Mitigation or Enhancement

Plant Ponderosa pine at Site III after the structures are removed.

H. Residual Impacts

The gravel for the boat ramp would prevent any vegetation growth on the ramp.

I. Short-Term Use vs. Long-Term Productivity

Machinery to build a boat ramp and remove the structures will cause short-term noise and exhaust pollution.

J. Irreversible and Irretrievable Commitment of Resources

None

K. Attitudes and Expectations

Local residents of the area as well as visitors have expressed a desire for there to be more public access areas to the river.

III. Persons, Groups and Government Agencies Consulted

Millard Coots - Department of Fish and Game, Redding
D. A. Gravenkamp - Siskiyou County Public Works Director
Chris Sellman - Siskiyou County Museum
Dave Rogers - Department of Fish and Game, Yreka
Ed Anderson - Soil Conservation Service, Yreka
County Assessor and Planning Commission

IV. Intensity of Public Interest

According to Siskiyou County, public interest in this area is low at the present. In the past fishermen have trespassed private land without much problem. However, if the trend toward subdivision development along the river continues, this won't be possible.

V. Staff Participation

Robert Fay
Steve Tarnay
Bert Hart

VII. Environmental Statement Recommendation

Due to the slight impact on the environment, it is not recommended that an environmental impact statement be necessary.

SITE II

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ENVIRONMENTAL ANALYSIS WORKSHEET

1. Action: The purpose of this action is to develop a picnic area along the Klamath River.

2. Stages of implementation

4. COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	3. DISCRETE OPERATIONS: Remove structures	Parking and signing	Plant trees	Tables and firegrills	Maintenance and use	Portable toilets	6. REMARKS
I. NONLIVING COMPONENTS							
A. AIR							
Movement	0	0	0	0	0	L	
Temperature	0	0	0	0	0	0	
Pollution/particulate matter	0	-L	0	0	0	0	
B. LAND							
Soil depth	0	0	0	0	0	0	
Soil structure	0	0	+L	0	0	0	
Soil nutrient	0	0	+L	0	0	0	
Soil erosion	0	0	+L	0	0	0	
Land-use capacity	+L	L	+L	+L	0	L	
Land-use suitability	+L	L	+L	+L	0	0	
Pollution-litter	+L	0	0	-L	L	0	
C. WATER							
Quality	0	0	0	0	-L	0	Possibility of pollution
II. LIVING COMPONENTS							
A. PLANTS *(Aquatic)*							
	0	0	0	0	0	0	

(Continued on reverse)

	COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	Remove structures	Parking and signing	Plant trees	Tables and firegrills	Maintenance and uses	Portable toilets	REMARKS
II. LIVING COMPONENTS (Con.)	B. PLANTS *(Terrestrial)*							
	Grasses and forbs	+M	-L	0	0	-L	0	
	Shrubs	+M	0	0	0	0	0	
	Trees	+M	0	0	0	0	0	
	C. ANIMALS *(Aquatic)*							
	Fish	0	0	0	0	0	0	
	Birds	0	0	+L	0	-L	0	
	D. ANIMALS *(Terrestrial)*							
	Mammals	+L	-L	+L	0	-L	L	
	Birds	0	0	+M	0	-L	0	
	Reptiles and amphibians	0	-L	+L	0	0	0	
	Insects	0	0	+L	0	0	0	
	Man	+M	+M	+M	+M	+M	+M	
III. INTERRELATIONSHIPS	A. ECOLOGICAL PROCESSES							
	Succession	+M	-L	+M	0	-L	0	
	Food Relationships	+M	-L	+M	0	-L	0	
	Community relationships	L	-L	+M	0	-L	0	
IV. HUMAN VALUES	A. LANDSCAPE CHARACTER							
	Harmonious	+M	0	+M	L	0	L	
	Accentuating	+M	L	+M	L	0	L	
	B. SOCIOCULTURAL INTERESTS							
	Educational-Scientific	0	0	+L	0	0	0	
	Cultural-Historical	-M	0	0	0	0	0	
	Social welfare	+M	+L	+M	+M	+M	H+	
	Local regulatory structure	0	0	0	0	L	0	
	Attitudes and expectations	+L	+L	+M	+M	+M	+M	

INSTRUCTIONS

1. *Action* – Enter action being taken, analytic step for which worksheet is being used, environmental viewpoint of impact, and any assumptions relating to impact.
   a. Worksheet is normally used to analyze *"Anticipated Impacts"* of action; *however*, it may be used to analyze *"Residual Impacts."* Worksheets may also be used to compare impacts before and after mitigating measures are applied.
   b. State viewpoint that best describes environmental impact. For example, a fence viewed down the fence line has greater impact than the same fence viewed over an entire allotment. Generally, narrow viewpoints better illustrate specific impacts than will broad viewpoints.
   c. Assumptions may be made to establish a base for analysis *(e.g. estimated time periods, season of year, etc.)*.

2. *Stages of Implementation* – Identify different phases of proposed project *(e.g. a road project consists of survey, construction, use, and maintenance stages)*.

   Discrete Operations – Identify separate actions comprising a particular stage of implementation *(e.g. the construction stage of the road project has the discrete operations of clearing, grading, and surfacing)*.

4. *Elements Impacted* – Enter under appropriate heading all environmental elements susceptible to impact from action and alternatives. Relevant elements not contained in the digest should also be entered. See BLM Manual 1791, Appendix 2, Environmental Digest.

5. *Anticipated Impact* – Evaluate anticipated impact on each element and place an entry in the appropriate square indicating degree of impact as low (L), medium (M), high (H), no impact (O), or unknown or negligable (X). Preceed each entry by a plus (+) or minus (-) sign indicating a beneficial or adverse type of impact. If type of impact reflects a matter of opinion or is not known, *do not* preceed with a sign. For example, construction of a wind mill on open range has a definite visual impact; *however*, to some people the effect is detrimental while to others it is an improvement. By not entering a plus (+) or minus (-) sign the worksheet is kept factual and unbiased. If both degree and type of impact are unknown, place an (x) in the appropriate square.
   a. The measures of impact *(e.g. low, medium, and high)* are relative and their meaning may vary slightly from action to action. The term *"low"* should not be applied to impacts of a negligible nature. For example, we know that a pickup truck driving down a proposed fence line laying wire has some impact on air quality. However, the significance of this impact is not normally great enough to warrant even a *"low"* rating. In cases like this, the impact will usually be marked *"O"* or the element left off the worksheet.
   b. It is recognized that some environmental elements may defy accurate measurement or in-depth analysis within current Bureau capabilities or expertise. The nature of the action as well as type and degree of impact should guide in the decision to seek outside expertise or assistance.

6. *Remarks* – Enter clarifying information.

GPO 857 - 841

SITE III--OSBURGER
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ENVIRONMENTAL ANALYSIS WORKSHEET

1. Action
The purpose of this action is to develop a picnic area & boat ramp along the Klamath River.

2. Stages of implementation

	Destruction & Construction					Recomendation for Mitigation	Maint. & Use		
3. DISCRETE OPERATIONS	Remove structures, well	Parking area	Tables and firepits	Boat access	Plant trees	Maintenance	Use	Portable toilets	
4. COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	5. ANTICIPATED IMPACTS								6. REMARKS
I. NONLIVING COMPONENTS									
A. AIR									
Movement	0	0	0	0	L	0	0	L	
Temperature	0	0	0	0	+L	0	0	0	
Pollution/particulate matter	0	-L	0	0	0	0	0	0	
B. LAND									
Soil depth	0	0	0	0	0	0	0	0	
Soil structure	0	0	0	0	+L	0	0	0	
Soil nutrient	0	-L	0	0	+L	0	+L	0	
Soil erosion	0	-L	0	X	+L	0	-L	0	
Land-use	+M	+L	+M	+H	+H	+M	+M	L	
Land-use suitability	+M	+L	+M	+H	+H	+M	+M	0	
Pollution/Litter	+M	0	-L	0	0	+H	-L	0	
C. WATER									
Quality	0	0	0	X	0	0	-L	0	Possibility of pollution
II. LIVING COMPONENTS									
A. PLANTS *(Aquatic)*									
	0	0	0	X	0	0	0	0	

(Continued on reverse)

	COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	Remove structures, well	Parking area	Tables & firepits	Boat access	Plant trees	Maintenance	Use	Portable toilets	REMARKS
		ANTICIPATED IMPACTS								
II. LIVING COMPONENTS (Con.)	B. PLANTS *(Terrestrial)*									
	Grasses	+L	-L	-L	-L	0	0	-L	0	
	Shrubs	0	0	0	0	0	0	0	0	
	Trees	+L	0	0	0	0	0	0	0	
	C. ANIMALS *(Aquatic)*									
	Fish	0	0	0	X	0	0	0	0	
	Birds	0	0	0	0	+L	0	-L	0	
	D. ANIMALS *(Terrestrial)*									
	Mammals	0	-L	0	0	+L	0	-L	L	
	Birds	0	0	0	0	+L	0	-L	0	
	Insects	0	0	+L	0	+L	0	+L	0	
	Reptiles	-L	-L	0	0	+L	0	-L	0	
	Man	+M	+M	+M	+M	+M	+M	+M	+M	
III. INTERRELATIONSHIPS	A. ECOLOGICAL PROCESSES									
	Succession	+L	-L	0	0	+L	0	-L	0	
	Food Relationships	0	-L	0	0	+L	0	-L	0	
	Community Relationships	0	-L	0	X	+L	0	-L	0	
IV. HUMAN VALUES	A. LANDSCAPE CHARACTER									
	Harmonious	+H	-L	+L	0	+H	0	0	L	
	Accentuating	+H	-L	+L	0	+H	0	0	L	
	B. SOCIOCULTURAL INTERESTS									
	Local Regulatory structure	0	0	0	0	0	L	0	0	
	Educational-Scientific	+L	0	0	+L	+M	0	0	0	
	Cultural	-L	0	0	0	0	0	0	0	
	Social Welfare	+M	+L	+M	+M	+M	+M	+M	H	
	Attitudes & Expectations	+M	+L	+M	+M	+M	+M	+M	M	

INSTRUCTIONS

1. *Action* – Enter action being taken, analytic step for which worksheet is being used, environmental viewpoint of impact, and any assumptions relating to impact.
   a. Worksheet is normally used to analyze *"Anticipated Impacts"* of action; *however*, it may be used to analyze *"Residual Impacts."* Worksheets may also be used to compare impacts before and after mitigating measures are applied.
   b. State viewpoint that best describes environmental impact. For example, a fence viewed down the fence line has greater impact than the same fence viewed over an entire allotment. Generally, narrow viewpoints better illustrate specific impacts than will broad viewpoints.
   c. Assumptions may be made to establish a base for analysis *(e.g. estimated time periods, season of year, etc.)*.

2. *Stages of Implementation* – Identify different phases of proposed project *(e.g. a road project consists of survey, construction, use, and maintenance stages)*.

3. *Discrete Operations* – Identify separate actions comprising a particular stage of implementation *(e.g. the construction stage of the road project has the discrete operations of clearing, grading, and surfacing)*.

4. *Elements Impacted* – Enter under appropriate heading all environmental elements susceptible to impact from action and alternatives. Relevant elements not contained in the digest should also be entered. See BLM Manual 1791, Appendix 2, Environmental Digest.

5. *Anticipated Impact* – Evaluate anticipated impact on each element and place an entry in the appropriate square indicating degree of impact as low (L), medium (M), high (H), no impact (O), or unknown or negligable (X). Preceed each entry by a plus (+) or minus (–) sign indicating a beneficial or adverse type of impact. If type of impact reflects a matter of opinion or is not known, *do not* preceed with a sign. For example, construction of a wind mill on open range has a definite visual impact; *however*, to some people the effect is detrimental while to others it is an improvement. By not entering a plus (+) or minus (–) sign the worksheet is kept factual and unbiased. If both degree and type of impact are unknown, place an (x) in the appropriate square.
   a. The measures of impact *(e.g. low, medium, and high)* are relative and their meaning may vary slightly from action to action. The term *"low"* should not be applied to impacts of a negligible nature. For example, we know that a pickup truck driving down a proposed fence line laying wire has some impact on air quality. However, the significance of this impact is not normally great enough to warrant even a *"low"* rating. In cases like this, the impact will usually be marked *"O"* or the element left off the worksheet.
   b. It is recognized that some environmental elements may defy accurate measurement or in-depth analysis within current Bureau capabilities or expertise. The nature of the action as well as type and degree of impact should guide in the decision to seek outside expertise or assistance.

6. *Remarks* – Enter clarifying information.

GPO 857 – 541

SITE IV AND SITE V ENVIRONMENTAL ANALYSIS

I. Analysis of Proposed Actions and Alternatives

The proposed action is to develop public recreational facilities on two areas along Irongate Reservoir. The proposal for site IV is to develop a parking area with a trash can, a foot trail and picnic tables along the water, and provide picnic tables, firegrills and trash cans adjacent to a Pacific Power & Light water access area. The proposal for Site V is to develop a gravel boat ramp on the south side of the lake, a small sign requesting that litter be taken out of the area by users, picnic tables and firegrills, and a trail from the road down to the site. The north side of the site would be left as it is.

A. Background Data

Site IV is located in the W. 1/2 Section 4, T. 47 N., R. 5 W., M.D.M. Site V is located between Wanaka Spring and Jenny Creek and covers both sides of the lake, in the SW¼NE¼ and the and the NW¼SE¼, Section 34, T. 48 N., R. 5 W. Both site areas were found by a 15 min. topographic map of Copco Lake and are accessible from a county dirt road on the south side of the lake, or by boat. (See Appendix X)

Irongate Reservoir is a recreational lake that offers fishing, boating and water skiing. Pacific Power and Light Company presently maintains eight recreation areas along the lake, and has plans to develop more areas as the need arises and funding becomes available. Usage at these sites has grown significantly since 1968 (see Appendix VI), and is expected to continue to increase.

Site IV covers a small knoll that borders a P.P. & L. water access area. The knoll is shaded with oak trees and there is room for a couple picnic tables. The site also covers a large knoll that is half owned by P.P. & L. In the past the south side of the knoll was cut away and mined for gravel. A dirt road remains that leads to an area on the knoll that is concealed from the county road, and would make a good parking location. On the north side of the knoll is a slope of about 20 degrees that sweeps down to the water. It is vegetated by an oak woodland.

The north side of Site V is an area that has heavily eroded and unstable soil. The major vegetation is star thistle and a few juniper trees. The south side of the site has an oak woodland set against a hilly slope. This area has been used by tent campers as it is accessible only by a boat or foot. The trees offer some privacy.

B. Action Purpose

The purpose of this action is to provide two recreational areas on the reservoir that would provide parking, trails, picnic facilities, a boat ramp, and an overnight campground.

C. Available Alternatives

Alternatives for these areas are few because of the given space and terrain. An alternative for Site IV would be to develop an overnight campiing area. This would require engineering of the hillside to make enough level area. An alternative for Site V would be to develop the campground on the north side of the lake.

The alternative of no action is applicable to both sites. Impacts of these alternatives will be shown on the comparison chart.

D. Action Component

The stages of implementation for Site IV are construction of road and parking, picnic facilities, trail, maintenance and use. The discrete operations include: Road improvement and parking area, building a trail system, picnic area construction, and a maintenance program.

The stages of implementation for Site V are boat ramp construction trail development, campsite development, maintenance and use. The discrete operations include: Gravelling a boat ramp and putting a sign next to it, building a trail from the road and signing it, providing picnic tables and firegrills, and maintenance and use.

II. Analysis Proposed Actions and Alternatives

A. Environmental Impacts

1. Air

The impact on air would be insignificant.

2. Land

There would be some slight erosion from usage of the areas, such as along the trail. A litter problem may arise at Site V.

3. Water

The proposed development would have no significant impact on the water, but usage of the areas may. There is a possibility of people allowing soap, car oil, orother pollutants to enter the river.

B. Living Components

1. Aquatic Plants

The impact on the water would be insignificant.

2. Terrestrial Plants

At both sites the only real impact on the vegetation would be trampling of grasses around the picnic tables, camping areas, and trails.

3. Aquatic Animals

The impact on aquatic animals would be insignificant.

4. Terrestrial Animals

This proposal does not affect wildlife food or shelter, so the impact would be insignificant.

C. Ecological Processes

The only affect on ecological processes would be where vegetation has been trampled, taking food from some organisms of the environment, and upsetting the soil by slight erosion.

D. Landscape Character

These proposals make only slight changes in the landscape character because any development would be camouflaged somewhat by the trees.

E. Socio-cultural Interests

These developments offer different kinds of recreational possibilities than what already exists on the lake, and so more people would be able to benefit from the area.

F. Attitudes and Expectations

Public opinion is favorable towards having free recreational facilities on the lake.

G. Possible Mitigating or Enhancing Measures

Reshape the large knoll where mining activities have cut away the slope, and plant some vegetation.

H. Recommendations for Mitigation or Enchancement

The above should be considered, to whatever degree of change is possible.

I. Residual Impacts

None

J. Short-Term Use vs. Long-Term Productivity

For the recommended mitigating and enhancing measure, large machinery would be necessary that would create short-term noise and dust pollution. The long-term effect would be a significantly improved landscape character.

K. Irreversible and Irretrievable Commitment of Resources

None

III. Persons, Groups, and Government Agencies Consulted

Wayne Harris - Siskiyou Power Superintendent for Pacific Power & Light
Larry Espey - Recreation Facilities Director - Pacific Power & Light
Millard Coots - California Department of Fish & Game -
Associate Fishery Biologist, Redding
Ed Anderson - Soil Conservation Service, Yreka
Siskiyou County Assessor's Office and Planning Commission
Jim Liskey - Local Resident
Charles Liskey - Local Resident

IV. Intensity of Public Interest

No information on public interest was available for Irongate Reservoir.

V. Staff Participation

Robert Fay
Bert Hart
Steve Tarnay

VI. Environmental Recommendation

The proposal is for minimal development to preserve the natural qualities of the area. There are no significant impacts anticipated, therefore an environmental impact statement is not recommended.

COMPARISON CHART OF ALTERNATIVES FOR SITE IV

	Air Quality	Soil	Terrestrial Plants	Terrestrial Animals	Land-use Compatibility & Suitability	Water Pollution	Landscape Character	Social Welfare
Proposed Action	No Change	Slight Impact	Slight Impact	Slight Impact	Slight Impact	Slight Impact	Slight Impact	Moderate Impact
Alternative 1	No Change	Moderate Impact	Slight Impact	Slight Impact	High Impact	Slight Impact	Moderate Impact	Moderate Impact
Alternative 2 (No action)	No Change	No Change	No Change	No Change	No Change	No Change	Slight Impact	Slight Impact

COMPARISON CHART OF ALTERNATIVES FOR SITE V

Proposed Action	No Change	Slight Impact	Slight Impact	Slight Impact	Slight Impact	Slight Impact	Slight Impact	Moderate Impact
Alternative 1	No Change	High Impact	High Impact	Slight Impact	High Impact	Slight Impact	High Impact	Moderate Impact
Alternative 2 (No action)	No Change	No Change	No Change	No Change	No Change	No Change	No Change	Slight Impact

SITE V

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ENVIRONMENTAL ANALYSIS WORKSHEET

1. Action

The proposed action is to develop an overnight camping area.

2. Stages of implementation

	Access Development			Campsite Development	Maintenance and Use	
3. DISCRETE OPERATIONS	Boat ramp and signing	Trail & signing	Picnic tables & firegrills	Maintenance	Use	
4. COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	5. ANTICIPATED IMPACTS					6. REMARKS
I. NONLIVING COMPONENTS						
A. AIR						
Movement	0	0	0	0	0	
Temperature	0	0	0	0	0	
Pollution/particulate	0	0	0	0	0	
B. LAND						
Soil depth	0	0	0	0	0	
Soil structure	0	0	0	0	0	
Soil nutrient	0	0	0	0	0	
Soil erosion	-L	-L	0	0	-L	
Land-use compatibility	+M	+M	+M	+M	+M	
Land-use suitability	+M	+M	+M	+M	+M	
C. WATER						
Quality	0	0	0	0	0	
II. LIVING COMPONENTS						
A. PLANTS *(Aquatic)*	0	0	0	0	0	

(Continued on reverse)

	COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	Boat ramp and signing	Trail development and signing	Picnic tables and firegrills	Maintenance	Use	REMARKS
II. LIVING COMPONENTS (Con.)	B. PLANTS *(Terrestrial)*						
	Grasses & forbs	-L	-L	-L	0	-L	
	Shrubs	0	0	0	0	0	
	Trees	0	0	0	0	0	
	C. ANIMALS *(Aquatic)*						
	Fish	0	0	0	0	0	
	Birds	0	0	0	0	-L	
	D. ANIMALS *(Terrestrial)*						
	Mammals	0	L	0	0	-L	
	Birds	0	0	0	0	-L	
	Reptiles & amphibians	0	0	0	0	0	
	Insects	0	0	+L	0	0	
	Man	+M	+M	+M	+M	+M	
III. INTERRELATIONSHIPS	A. ECOLOGICAL PROCESSES						
	Succession	-L	-L	-L	0	-L	
	Food relationships	-L	0	0	0	0	
	Community relationships	0	L	0	0	-L	
IV. HUMAN VALUES	A. LANDSCAPE CHARACTER						
	Harmonious	L	L	L	+L	0	
	Accentuating	L	L	L	+L	0	
	B. SOCIOCULTURAL INTERESTS						
	Educational-Scientific	+L	+L	0	0	0	
	Cultural values	0	0	0	0	0	
	Social welfare	+M	+M	+M	+M	+M	
	Local regulatory structure	)	0	0	L	0	
	Attitudes & Expectations	+M	+M	+M	+M	+M	

INSTRUCTIONS

1. *Action* – Enter action being taken, analytic step for which worksheet is being used, environmental viewpoint of impact, and any assumptions relating to impact.
   a. Worksheet is normally used to analyze *"Anticipated Impacts"* of action, *however,* it may be used to analyze *"Residual Impacts."* Worksheets may also be used to compare impacts before and after mitigating measures are applied.
   b. State viewpoint that best describes environmental impact. For example, a fence viewed down the fence line has greater impact than the same fence viewed over an entire allotment. Generally, narrow viewpoints better illustrate specific impacts than will broad viewpoints.
   c. Assumptions may be made to establish a base for analysis *(e.g. estimated time periods, season of year, etc.).*
2. *Stages of Implementation* – Identify different phases of proposed project *(e.g. a road project consists of survey, construction, use, and maintenance stages).*
3. *Discrete Operations* – Identify separate actions comprising a particular stage of implementation *(e.g. the construction stage of the road project has the discrete operations of clearing, grading, and surfacing).*
4. *Elements Impacted* – Enter under appropriate heading all environmental elements susceptible to impact from action and alternatives. Relevant elements not contained in the digest should also be entered. See BLM Manual 1791, Appendix 2, Environmental Digest.
5. *Anticipated Impact* – Evaluate anticipated impact on each element and place an entry in the appropriate square indicating degree of impact as low (L), medium (M), high (H), no impact (O), or unknown or negligable (X). Preceed each entry by a plus (+) or minus (-) sign indicating a beneficial or adverse type of impact. If type of impact reflects a matter of opinion or is not known, *do not* preceed with a sign. For example, construction of a wind mill on open range has a definite visual impact; *however,* to some people the effect is detrimental while to others it is an improvement. By not entering a plus (+) or minus (-) sign the worksheet is kept factual and unbiased. If both degree and type of impact are unknown, place an (x) in the appropriate square.
   a. The measures of impact *(e.g. low, medium, and high)* are relative and their meaning may vary slightly from action to action. The term *"low"* should not be applied to impacts of a negligible nature. For example, we know that a pickup truck driving down a proposed fence line laying wire has some impact on air quality. However, the significance of this impact is not normally great enough to warrant even a *"low"* rating. In cases like this, the impact will usually be marked *"O"* or the element left off the worksheet.
   b. It is recognized that some environmental elements may defy accurate measurement or in-depth analysis within current Bureau capabilities or expertise. The nature of the action as well as type and degree of impact should guide in the decision to seek outside expertise or assistance.
6. *Remarks* – Enter clarifying information.

GPO 857 - 541

SITE IV
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ENVIRONMENTAL ANALYSIS WORKSHEET

1. Action: The proposed action is to open an area along Irongate Dam for picnic and water access.

2. Stages of implementation: Construction; Maintenance and Use

3. DISCRETE OPERATIONS: Road improvement / Parking area; Trail; Picnic area; Maintenance; Use; Portable toilets

4. COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	5. ANTICIPATED IMPACTS						6. REMARKS
I. NONLIVING COMPONENTS							
A. AIR							
Movement	0	0	0	0	0	L	
Temperature	0	0	0	0	0	0	
Pollution/part. matter	-L	0	0	0	0	0	
B. LAND							
Soil depth	0	0	0	0	0	0	
Soil structure	0	0	0	0	0	0	
Soil nutrient	0	0	0	0	0	0	
Soil erosion	-L	-L	0	0	-L	0	
Land-use Compatibility	+M	+L	+L	+M	+M	L	
Land-use suitability	+M	+L	+L	+M	+M	0	
C. WATER							
Quality	0	0	0	0	0	0	
II. LIVING COMPONENTS							
A. PLANTS *(Aquatic)*							
	0	0	0	0	0	0	

(Continued on reverse)

	DISCRETE OPERATIONS	Road improvement Parking area	Trail	Picnic area	Maintenance	Use	Portable toilets	
	COMPONENTS, SUBCOMPONENTS, AND ELEMENTS IMPACTED	ANTICIPATED IMPACTS						REMARKS
II. LIVING COMPONENTS (Con.)	B. PLANTS *(Terrestrial)*							
	Grasses and forbs	-L	-M	-M	0	-M	0	
	Shrubs	0	0	0	0	0	0	
	Trees	0	0	0	0	0	0	
	C. ANIMALS *(Aquatic)*							
	Fish	0	0	0	0	0	0	
	Birds	0	0	0	0	0	0	
	D. ANIMALS *(Terrestrial)*							
	Mammals	0	0	0	0	0	L	
	Birds	0	0	0	0	0	0	
	Reptiles & amphibians	0	0	0	0	0	0	
	Insects	0	0	+L	0	0	0	
	Man	+M	+M	+M	+M	+M	+M	
III. INTERRELATIONSHIPS	A. ECOLOGICAL PROCESSES							
	Succession	-M	-M	-L	0	-L	0	
	Food Relationships	-L	-L	L	0	0	0	
	Community Relationships	-L	L	0	0	0	0	
IV. HUMAN VALUES	A. LANDSCAPE CHARACTER							
	Harmonious	-L	L	L	+L	0	L	
	Accentuating	-L	L	L	+L	0	L	
	B. SOCIOCULTURAL INTERESTS							
	Local regulatory structure	0	0	0	0	L	0	
	Educational-Scientific	0	+M	+L	0	0	0	
	Cultural-Historical	0	0	0	0	0	0	
	Social welfare	+M	+M	+M	+M	+M	+H	
	Attitudes & Expectations	+M	+M	+M	+M	0	M	

INSTRUCTIONS

1. *Action* – Enter action being taken, analytic step for which worksheet is being used, environmental viewpoint of impact, and any assumptions relating to impact.
   a. Worksheet is normally used to analyze *"Anticipated Impacts"* of action; *however*, it may be used to analyze *"Residual Impacts."* Worksheets may also be used to compare impacts before and after mitigating measures are applied.
   b. State viewpoint that best describes environmental impact. For example, a fence viewed down the fence line has greater impact than the same fence viewed over an entire allotment. Generally, narrow viewpoints better illustrate specific impacts than will broad viewpoints.
   c. Assumptions may be made to establish a base for analysis *(e.g. estimated time periods, season of year, etc.)*.

2. *Stages of Implementation* – Identify different phases of proposed project *(e.g. a road project consists of survey, construction, use, and maintenance stages)*.

3. *Discrete Operations* – Identify separate actions comprising a particular stage of implementation *(e.g. the construction stage of the road project has the discrete operations of clearing, grading, and surfacing)*.

4. *Elements Impacted* – Enter under appropriate heading all environmental elements susceptible to impact from action and alternatives. Relevant elements not contained in the digest should also be entered. See BLM Manual 1791, Appendix 2, Environmental Digest

5. *Anticipated Impact* – Evaluate anticipated impact on each element and place an entry in the appropriate square indicating degree of impact as low (L), medium (M), high (H), no impact (O), or unknown or negligable (X). Preceed each entry by a plua (+) or minus (-) sign indicating a beneficial or adverse type of impact. If type of impact reflects a matter of opinion or is not known, *do not* preceed with a sign. For example, construction of a wind mill on open range has a definite visual impact; *however*, to some people the effect is detrimental while to others it is an improvement. By not entering a plus (+) or minus (-) sign the worksheet is kept factual and unbiased. If both degree and type of impact are unknown, place an (x) in the appropriate square.
   a. The measures of impact *(e.g. low, medium, and high)* are relative and their meaning may vary slightly from action to action. The term *"low"* should not be applied to impacts of a negligible nature. For example, we know that a pickup truck driving down a proposed fence line laying wire has some impact on air quality. However, the significance of this impact is not normally great enough to warrant even a *"low"* rating. In cases like this, the impact will usually be marked *"O"* or the element left off the worksheet.
   b. It is recognized that some environmental elements may defy accurate measurement or in-depth analysis within current Bureau capabilities or expertise. The nature of the action as well as type and degree of impact should guide in the decision to seek outside expertise or assistance.

6. *Remarks* – Enter clarifying information.

GPO 857 - 841

Form 2060-1
(January 1969)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

LAND REPORT TITLE PAGE

State	District	
California	Redding	
County	Resource area	Planning Unit
Siskiyou	Siskiyou	Middle Klamath
Type of Action		Serial Number
Bureau Motion Withdraw		-
Applicant's name	Address *(include zip code)*	

Date(s) of examination

LANDS INVOLVED

TOWNSHIP	RANGE	MERIDIAN	SECTION	SUBDIVISION	ACRES
46 W.	7 W.	M.D.M.	24	$N\frac{1}{2}NE\frac{1}{4}$	80
46 W.	6 W.	M.D.M.	5	$NW\frac{1}{4}SE\frac{1}{4}$	20
47 W.	6 W.	M.D.M.	32	$SE\frac{1}{4}SE\frac{1}{4}$	20
47 W.	5 W.	M.D.M.	4	$W\frac{1}{2}SW\frac{1}{4}$	40
48 N.	5 W.	M.D.M.	34	$NW\frac{1}{4}NE\frac{1}{4}$ & $NW\frac{1}{4}SE\frac{1}{4}$	80

Purpose of report

Prepared by	Title	Date of report

GPO 848-296

I. Background and General Data

A. Land Office Status

This township is within the limits of the Transportation Act of 1940. This section is presently under a Powersite Reserve 258, Multiple Use Classification S2184, and Public Law 167. Across the river from the proposed recreational site is under Powersite Reserve 263. This segment of the Klamath River has been identified as Wild and Scenic under Section 567 of Public Law 90-542.

B. Planning Recommendations and Other Considerations (Taken directly from the Middle Klamath M.F.P.)

1. Lands

a. Open Space: All public lands designated open space are to be retained in Federal ownership for multiple use management. Land that is adjacent to the Klamath River is important for facilitating the study for Wild and Scenic Rivers designation.

b. Withdrawal area

2. Wildlife

None

3. Forestry

None

4. Watershed

None

5. Livestock Forage

a. Recommendation 1: Prior to initiation of any intensive grazing management system and/or systems, a well documented, complete vegetative inventory of all lands identified as being part of such a system must be complete. The type of data will definitely include collection of phenological data, utilization records, establishment of key areas, and reliable photo prints.

b. Recommendation 2: A thorough project inventory including any existing and proposed springs, reservoirs, fences, cattleguards, roads and trails within an identified area, to be completed prior to any intensive planning. This identified area would include private and Forest Service lands.

6. Recreation

2. R-1: BLM will contact the U.S. Forest Service and the California Department of Parks and Recreation in an effort to coordinate the 5(d) Wild River Assessment of the Klamath and Shasta Rivers for those portions that pass through National Resource Lands.

7. Minerals

A PL 167 determination has been completed on the subject land.

C. Area Analysis

The site is located about 10 miles NW of Yreka, the largest city in Siskiyou County, with a population of over 5,600. The site is within the narrow canyon of the Klamath River which supports only a few rustic residences. The U.S.F.S. boundary is about 4 miles west of the site.

The economy of Siskiyou County has been supported mainly by the livestock industry, mining and timber production. However, the recent trend has been more towards recreation and tourism, especially along the Klamath. This particular part of the Klamath is somewhat economically depressed, and can support only wildlife habitat.

II. Site Data

A. Location and Identification

This site is located on the Klamath River about 10 miles NW of Yreka, between Interstate 5 and U.S.F.S. boundary at Humbug Gulch. It is a narrow strip of land between Highway 96 and the river, and was identified by a topographic map of Hornbrook, California, and aerial photos.

B. Access

Physical and legal access is provided by California Highway 96, which runs west from Interstate 5.

C. Physical Characteristics

This site is located in a steep and narrow canyon, which supports chaparral mountain brush vegetation. The site itself is not much more than a sand bar created from mining tailings and the natural course of the river. Grasses and forbs are quite diverse, although sparse on the site. The main plant species include Oregon oak, willow and California wild grape.

The soil is rocky-sandy loam with high erosive qualities.

D. Improvements

There are no improvements on the parcel.

E. Utilities

There are no utilities except telephone lines along this part of the river.

III. Land Use Capabilities of Subject Land

A. Historical Uses and Present Uses

This particular site has been used in the past and present for recreation and some grazing. There are no mineral claims on this land.

B. Potential Uses

This site is not important for timber production because it is not forested, agriculture because of soil structure, occupancy or commerical uses because of flooding. Only very minimal grazing is possible. The most relevant land uses are wildlife habitat and low-development recreation.

IV. Land Use Analysis and Conclusions

A. In summary of the above data, it has been shown that recreation and wildlife habitat are the best possible uses on the subject land. Because of the importance and significance of the Klamath River as a recreational waterway, a recreational withdrawal would benefit public interests and the local economy.

SITES II AND III LAND REPORTS

I. Background and General Data

A. Land Office Status

Both townships are within the limits of the Transportation Act 1940. Both sections have a PL 167, Multiple Use Classification S2184, and have been identified as Wild and Scenic under Section 5(d) of Public Law 90-542. Site II also has a Powersite Reserve 258, mineral leasing stipulations S-259, and a Recreation Area Withdrawal PLO 2618. Site II has a mineral leasing stipulation S-259.

There is presently a mining claim on site II, under the name of Earl Roberts, of 443 Hefferman Avenue, Calexico, CA 92231.

There is a cabin on the land and the 1975 assessement has been done. In 1963 Percy Riness deeded the claim to Carl and Norman Cummins, who then deeded the claim to Roberts in 1964.

There is also a mining claim on Site III, under the name of Keith Wilkinson, of 208 N. Oregon Street, Yreka, CA. The claim called "Bridge Claim" was first filed in 1913 by W. L. Rader. Gene Kale deeded the claim to Wilkinson. There are 2 cabins on the site, an open well, a fence, and a dilapidated bridge.

B. Planning Recommendations and Other Considerations (Taken directly from the Middle Klamath M.F.P.)

1. Lands

Open Space: All public lands designated open space are to be retained in Federal ownership for multiple use management. Land that is adjacent to the Klamath River is important for facilitating the study for Wild and Scenic Rivers designation.

2. Wildlife

Site III only: Deer winter rehabilitation range

3. Forestry

None

4. Watershed

None

5. Livestock Forage

None

6. Recreation

a. R-1: BLM will contact the U.S. Forest Service and the

California Department of Parks and Recreation in an effort to coordinate the 5(d) Wild River Assessment of the Klamath and Shasta Rivers for those portions that pass through National Resource Lands.

7. Minerals

A PL 167 determination has been completed on the subject lands.

C. Area Analysis

The economy of Siskiyou County has been supported mainly by the livestock industry, mining and timber production. This part of the upper Klamath has recently been affected by the addition of two reservoirs and subdividing of much river-front property. Livestock raising is still important, but recreation has been increasing. This influx of tourism provides the main economy for the town of Hornbrook.

II. Site Data

A. Location and Identification (See Appendices I and II)

Both sites were located by a topographic map of Hornbrook, California. Both of these sites are located along the Klamath River on Anderson Grade Road, just north of Collier's Rest Area off Interstate 5. Site III is north of Site II by about a mile. They are located about 2 miles south of Hornbrook (population over 1000) and about 12 miles north of Yreka (population over 5,600).

B. Access

Physical and legal access is provided by Anderson Grade Road, a county maintained, narrow and rough, dirt road. It can be reached from Collier's Rest Area or from the east by the Copco Road bridge.

C. Physical Characteristics

Site II has a soil composed mostly of sandy loam and metamorphic rock. The vegetation ranges from chaparral mountain brush on the hillside to primarily grasses and forbs, skunkbrush, willow and juniper on the site.

Site III has a very rocky loam soil. The vegetation is diverse, from Ponderosa pine up the gulch, to grasses around the structures. Other dominant species include California wild grape, and skunkbrush.

D. Improvements

There are cabins owned by the mining claimant on Sites II and III.

E. Utilities

Power and telephone lines run through the canyon.

III. Land Use Capabilities of the Subject Land

A. Historical Uses and Present Uses

In the past both sites have been used almost exclusively for mining. At present they are used for limited grazing, recreation, and recreational occupancy.

IV. Land-Use Analysis and Conclusions

In summary of the above data, it has been shown that the best overall uses of the site lands are recreational, wildlife habitat and watershed protection. Because of the significance of the Klamath River as a recreational waterway, a recreational withdrawal would best benefit the public interests and the local economy. Unproductive mining claims prevent any public benefit from the lands.

SITES IV AND V LAND REPORTS

I. Background and General Data

A. Land Office Status

Both sites are under a Powersite Reserve 258, Power Project (powerline) 2082, Public Law 167, and Power Project 1161. In addition, Site IV is under Powersite 118, and has been identified as Wild and Scenic under Section 5(d) of Public Law 90-542, and the township is within the limits of the Transportation Act 1940.

B. Planning Recommendations and Other Considerations (Taken directly from the Middle Klamath M.F.P.)

1. Lands

a. DF-4: These lands will be retained in Federal ownership for multiple use management.

Alternative: Exchange out of these areas for lands that would provide a greater public benefit.

Conflict: Some of these parcels are valuable winter deer areas. Habitat for upland game birds could be effected.

b. Withdrawal areas

2. Wildlife

None

3. Forestry

None

4. Watershed

None

5. Livestock Forage

Site V only: Proposed management area: Prior to initiation of any intensive grazing management and/or systems, a well-documented, complete vegetative inventory of all lands identified as being part of such a system must be complete. The type of data will definitely include collection of phenological data, utilization records, establishment of key areas, and reliable photo prints.

6. Recreation

a. R-2: Schedule a revocation program for those lands

6. Recreation

a. R-2: Schedule a Revocation Program for those lands along the Klamath and Shasta Rivers currently under power-site withdrawals. Upon successful completion of the program, schedule identified lands for mineral withdrawal.

b. R-8: "Backcountry Analysis": Meanwhile the guidelines used in formulating "Backcountry Recommendations" in the Scott Valley MFP, April 1972, should be followed.

7. Minerals

A PL 167 determination has been completed on the subject lands.

C. Area Analysis

Both sites are located on Irongate Reservoir. Pacific Power and Light Company still owns most of the land along the north shore, and has provided several public recreational areas, and has plans to develop more. (See Appendix VII) All indications show that visitor usage is increasing on the reservoir. (See Appendix VI) Just below the dam, on the Klamath River, subdivision development is also doing much to bring recreation to the area.

The economy of this area has been primarily from livestock raising but the recreational trend is becoming more significant especially for the local businesses and ranchers who are selling their land for subdivision development.

II. Site Data

A. Location and Identification

Site IV is located just north of the dam, and was found by a topographic map of Copco Lake, California, P.P.& L. Powerline maps, and locating the SW corner. Site V is located between Wanaka Spring and Jenny Creek and was found by a topographic map of Copco Lake, California, and P.P. & L. Powerline maps.

B. Access

Physical and legal access is provided by a county-maintained dirt road that takes off from the end of Copco Road.

C. Physical Characteristics

Site IV has a stony-clay soil that has a moderate erosion hazard. The major vegetation type is oak woodland, with a few juniper interspersed.

The north side of Site V has a heavily eroded stony-clay soil. The vegetation is dominated by juniper and star thistle. The south side of the site is oak woodland.

D. Improvements

There are no improvements on the sites.

E. Utilities

Power and telephone lines are available.

III. Land Use Capabilities of the Subject Land

A. Historical Uses

In the past, an Indian settlement occupied the Jenny Creek area. However, due to road construction and development of the lake, it is most likely that the site has been destroyed from an archeological point of view.

An old mill owned by the Woods family made up a temporary settlement at Camp Creek.

B. Present Uses

The only developments presently along Irongate Reservoir are recreational.

C. Potential Uses

These sites are not suitable for timber production because the areas are not forested, agriculture because of soil composition and climate, or grazing because of species composition. The mining potential is low-nonexistent. Much of the surrounding land is owned by subdivision land companies, and water-front land is being retained for open space and recreational uses. Therefore, occupancy or commercial uses would not be compatible with this trend. The best uses of the sites are wildlife habitat, recreation, and open space.

IV. Land-Use Analysis and Conclusions

In summary of the above data, it has been shown that recreation and wildlife habitat are the best possible uses of these site lands. Irongate Reservoir is a significant recreational area, and the sites are small enough to prevent power-usage conflicts. A recreation withdrawal would best benefit the public interests.

UPPER KLAMATH RIVER
O R E G O N
Yreka
N E V A D A
M E X I C O

APPENDIX II

ALL BLM LAND

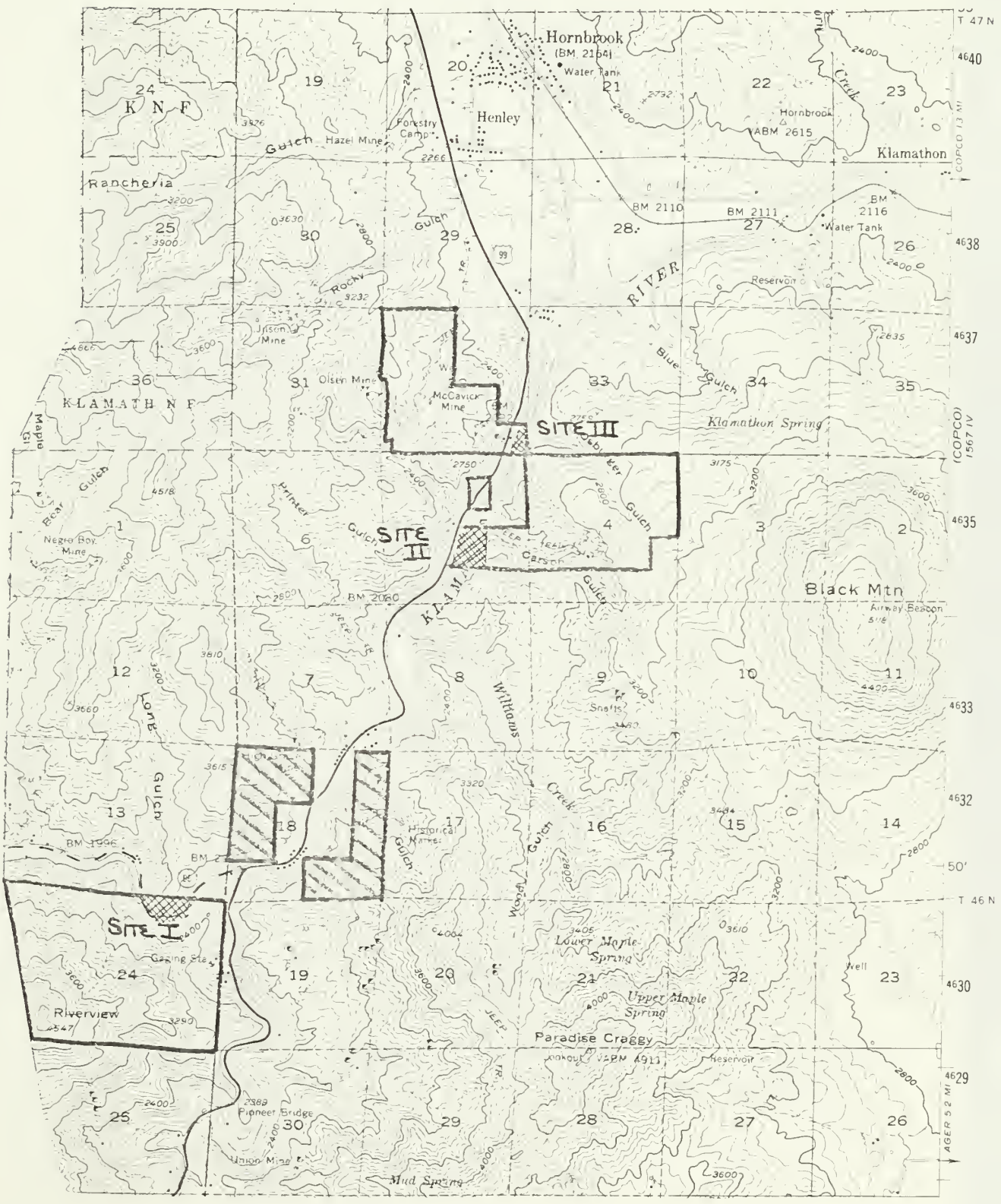
RECREATIONAL DEVELOPMENT EXISTS

SITES I-V

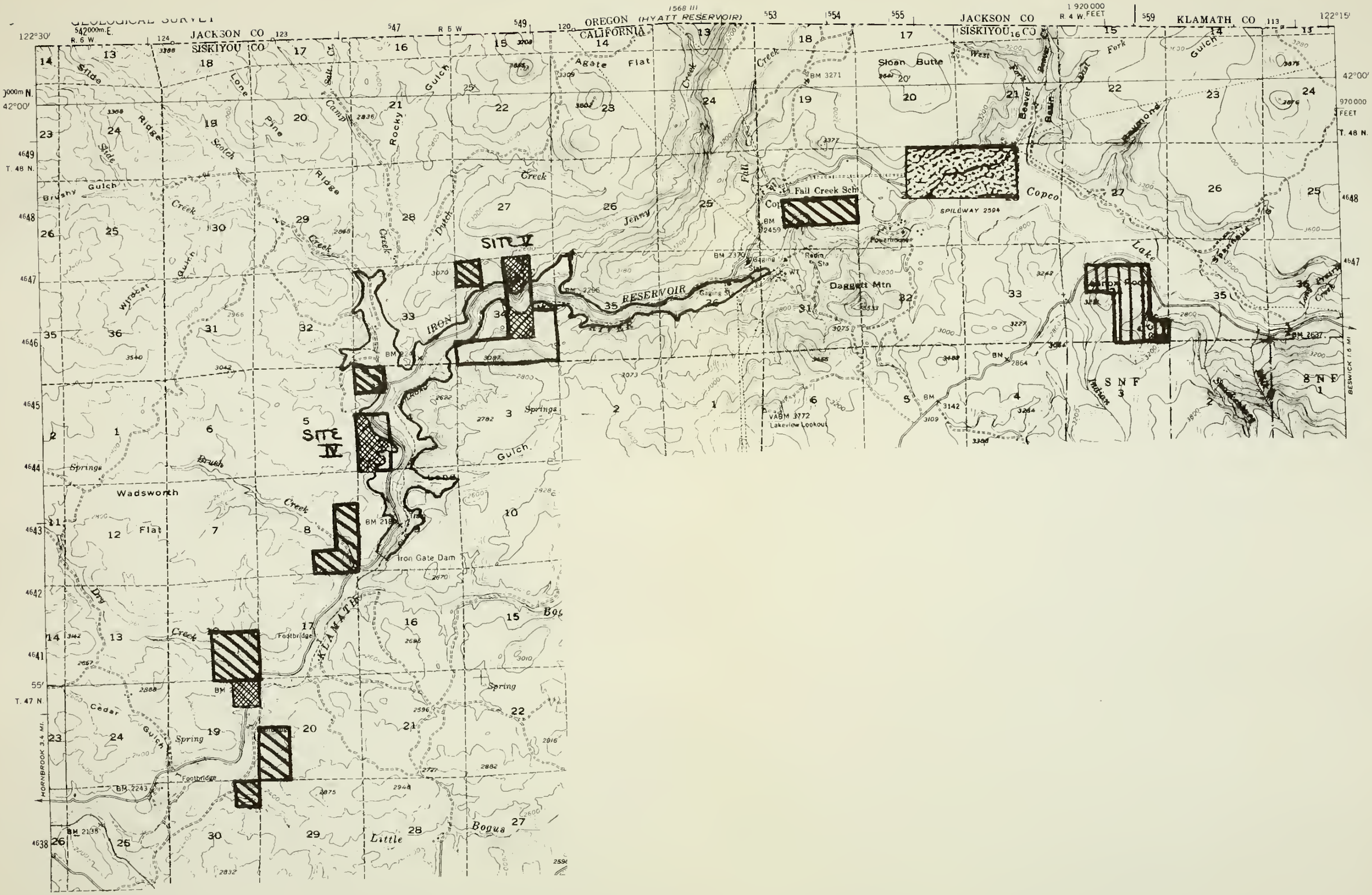
PROPOSED BLM ACQUISITION

BLM LAND THAT HAS BEEN STUDIED AND IS NOT SUITABLE FOR RECREATION

a. IT DOES NOT REACH THE RIVER
b. LAND-LOCKED
c. NOT ACCESSIBLE BY ROAD



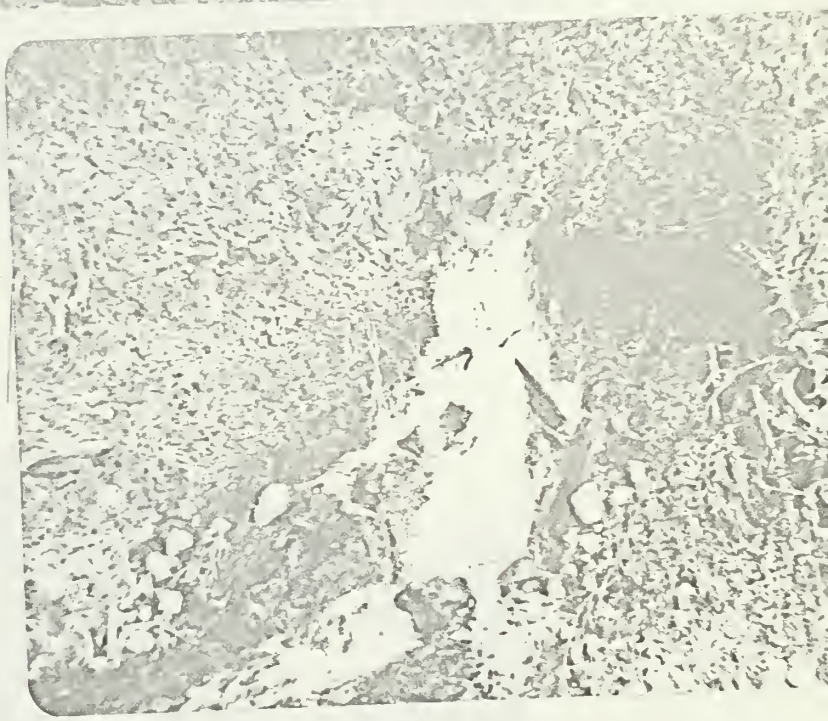
APPENDIX II


SITE V
SITE IV
RESERVOIR
IRON GATE
KLAMATH
RIVER
Iron Gate Dam
Fall Creek Sch
SPILLWAY 2594
Copco
Lake
Daggett Mtn
Sloan Butte
Agate Flat
Wadsworth
Flat
Springs
Gulch
Creek
Ridge
Lone Pine
Scotch
Rocky
Jenny
Dutch
Brushy
Wildcat
Cedar
Dry
Bogus
Little
Spring
Foothridge
Lakeview Lookout
JACKSON CO
SISKIYOU CO
KLAMATH CO
OREGON
CALIFORNIA
R. 6 W
R. 5 W
R. 4 W.
T. 48 N.
T. 47 N.
HORNBROOK 3.4 MI.
BEswick 1.6 MI
SNF

PACIFIC POWER AND LIGHT COMPANY
BOAT ACCESS AT IRON GATE DAM

WILDLIFE CONSERVATION BOARD PUBLIC
FISHING AND BOAT ACCESS

RECOMMENDED ACQUISITION ON COPCO LAKE



RECOMMENDED ACQUISITION ON COPCO LAKE

RECOMMENDED ACQUISITION AT DRY CREEK

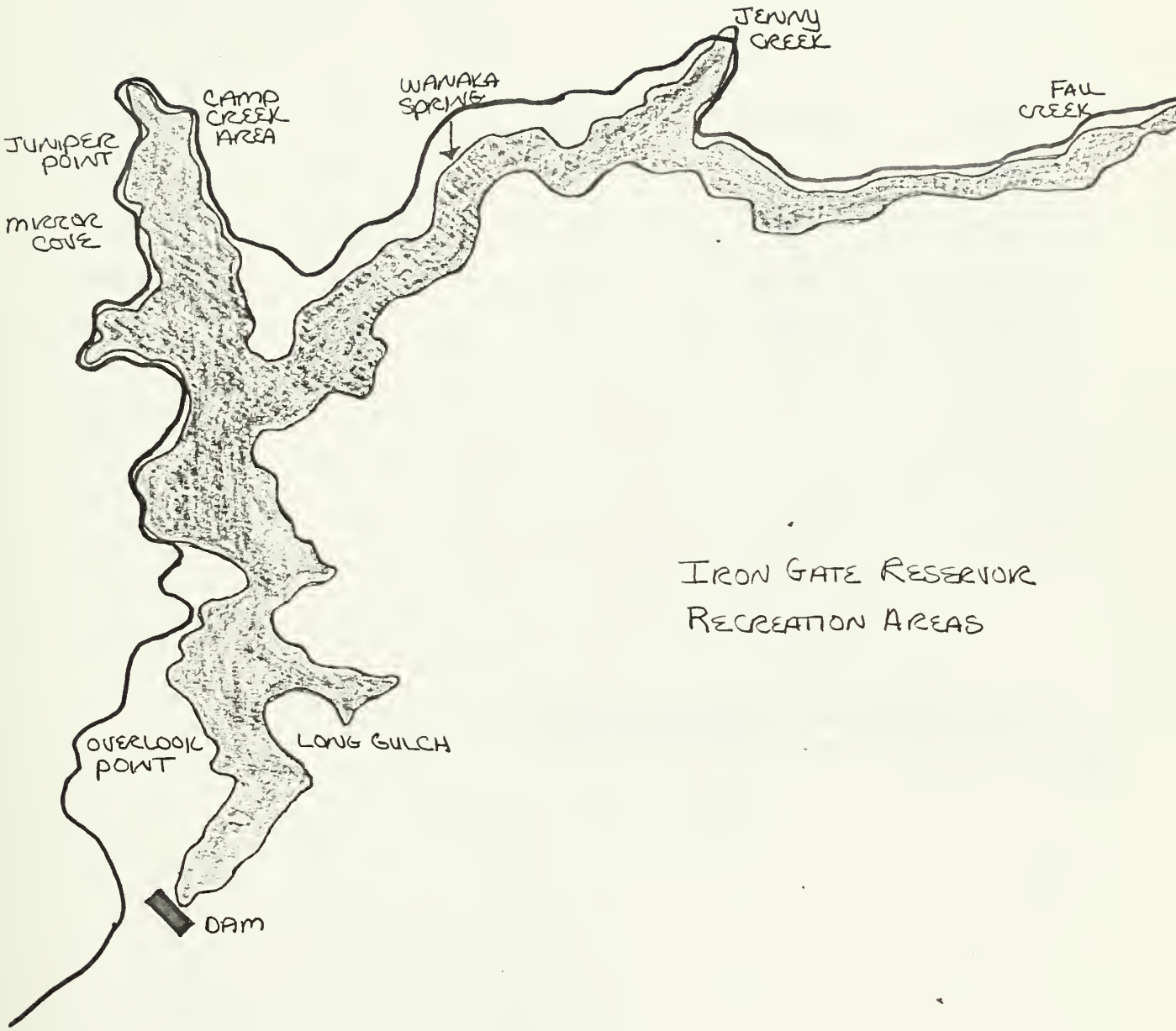
"R-RANCH"

KLAMATH RIVER ESTATES

IRON GATE RESERVOIR RECREATION USAGE COMPARISON TOTALS

PERIOD	CARS	PEOPLE	TRAILERS	CAMPERS	BOATS	TENTS
7-1 thru 9-13-68	729	2940	105	145	327	97
5-31 thru 9-30-69	1364	5593	266	438	822	349
5-13 thru 9-25-70	1072	3538	216	139	337	72
6-22 thru 9-3-71	609	2262	143	139	299	124
6-15 thru 9-6-72	740	3235	152	382	425	168
5-1 thru 9-30-73	1379	6300	329	658	757	254
5-1 thru 9-25-74	1783	8005	559	929	1006	261
7-YEAR TOTALS:	7676	31873	1770	2830	3973	1325

PACIFIC POWER AND LIGHT COMPANY



IRON GATE RESERVOIR
RECREATION AREAS

EXPECTED POPULATION TRENDS OF CITIES IN SISKIYOU COUNTY

YEAR	YREKA	DORRIS	HORNBROOK	WEED
1970	5676	1064	1120	3547
1980	6819	1136	1196	3977
1990	8060	1210	1272	4231
2000	8969	1324	1346	4698

Taken from "Overall Development Plan"
Siskiyou County Economic Development Comm.
1969

J BLM LANDS

K SOUTHERN PACIFIC LAND CO.

L HENRY FOICK

M JOEY LUCAS

N SCHULTZ

O STRYKER

P COLLIER'S REST AREA

Q ALVARADO

R WILLARD COLLINS

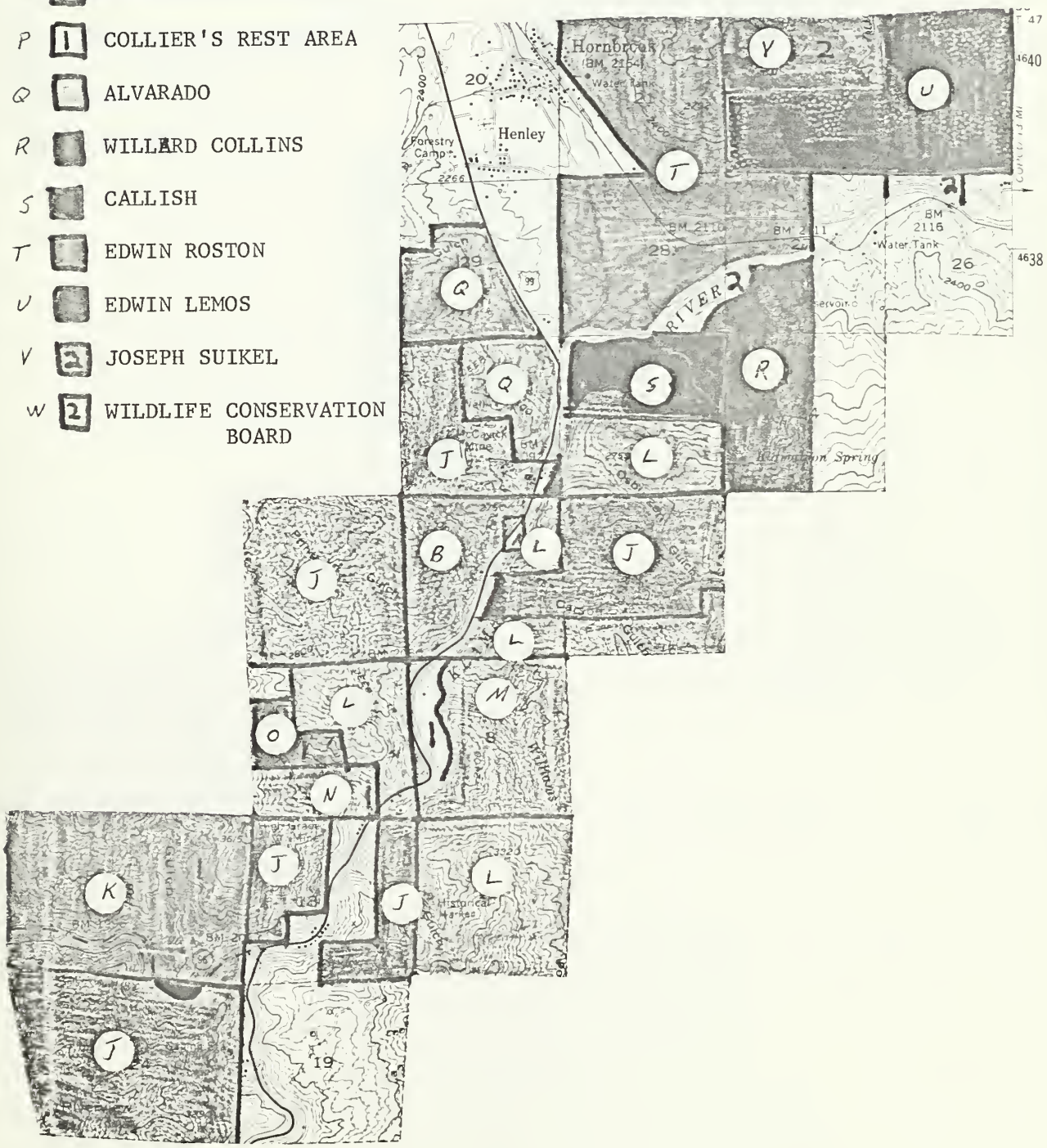
S CALLISH

T EDWIN ROSTON

U EDWIN LEMOS

V JOSEPH SUIKEL

W WILDLIFE CONSERVATION BOARD



A R-RANCH

B KENNETH HOUSTON

C CENTRAL VALLEY LAND CO.

D DRANE VANDYKE

E JAMES LISKEY

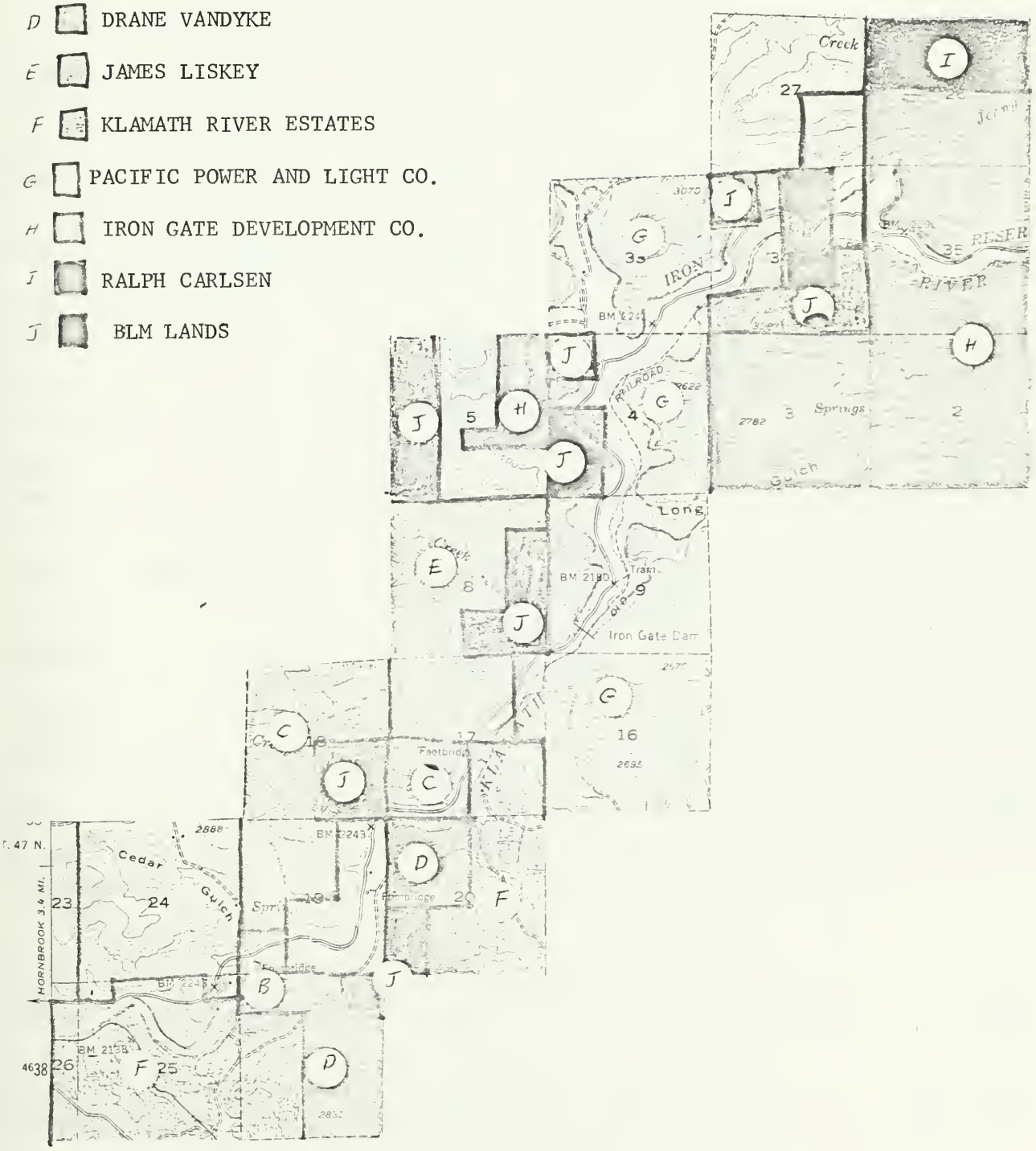
F KLAMATH RIVER ESTATES

G PACIFIC POWER AND LIGHT CO.

H IRON GATE DEVELOPMENT CO.

I RALPH CARLSEN

J BLM LANDS



ESTIMATED COSTS FOR DEVELOPMENT

	SITE I		SITE II		SITE III		SITE IV		SITE V	
	No.	Cost	No.	Cost	No.	Cost	No.	Cost	No.	Cost
Portable Toilet	2	1000	2	1000	2	1000	2	1000	0	-
Picnic Table	3	900	2	600	3	900	6	1800	2	600
Firepit	3	120	2	80	2	80	3	120	1	40
Trash Can	2	50	1	25	1	25	2	50	1	25
Tree Planting	6	300	5	300	0	-	0	-	0	-
Boat Ramp					1	1000			1	1000
Access	Culvert	900								
Signing			1	25			1	25	1	25
Fencing Cattle Ground			1	350	1	350				
Trail							¼ mi.	300	½ mi.	600
Spring Development					1	600				
Total Costs		3270		2380		3955		3295		2290
Annual Maint.	3mm	4800	1mm	1600	2mm	3200	2mm	3200	1mm	1600

MIRROR COVE

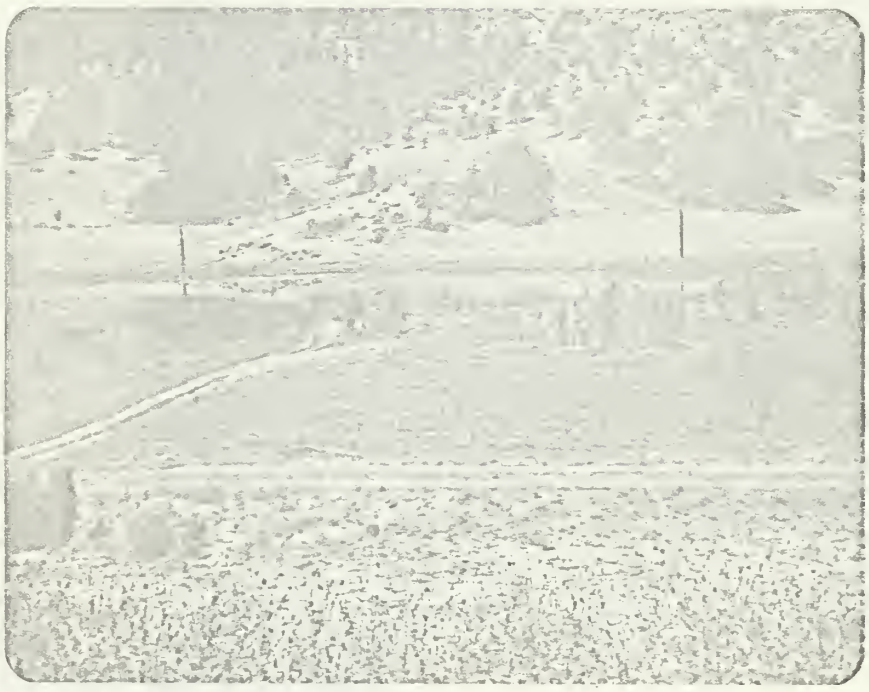
PACIFIC POWER AND LIGHT COMPANY
RECREATIONAL AREAS ON IRON GATE
RESERVOIR

CAMP CREEK
(four docks, including one for the handicapped)

WANAKA SPRING

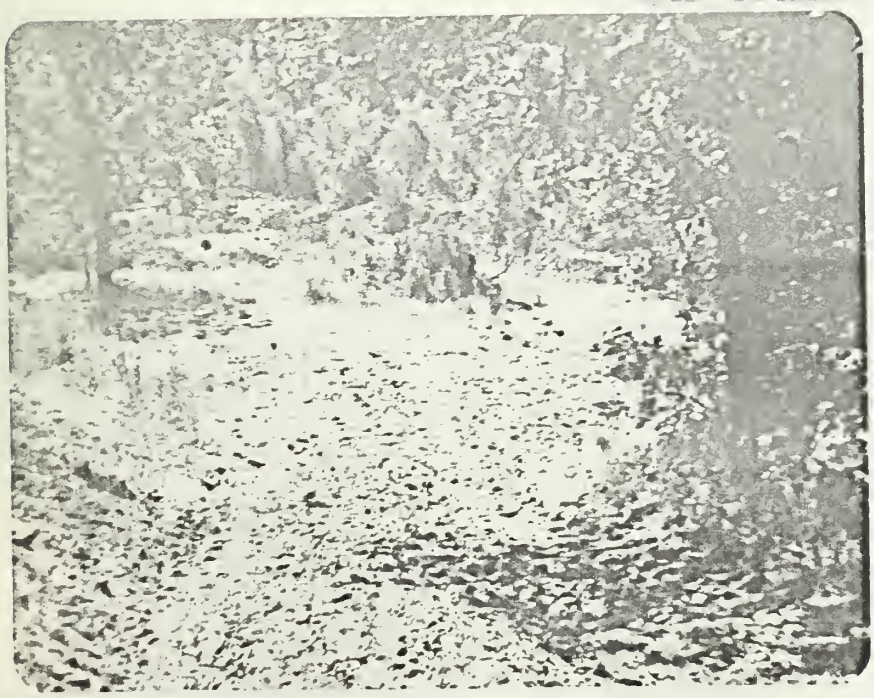
JENNY CREEK

FALL CREEK

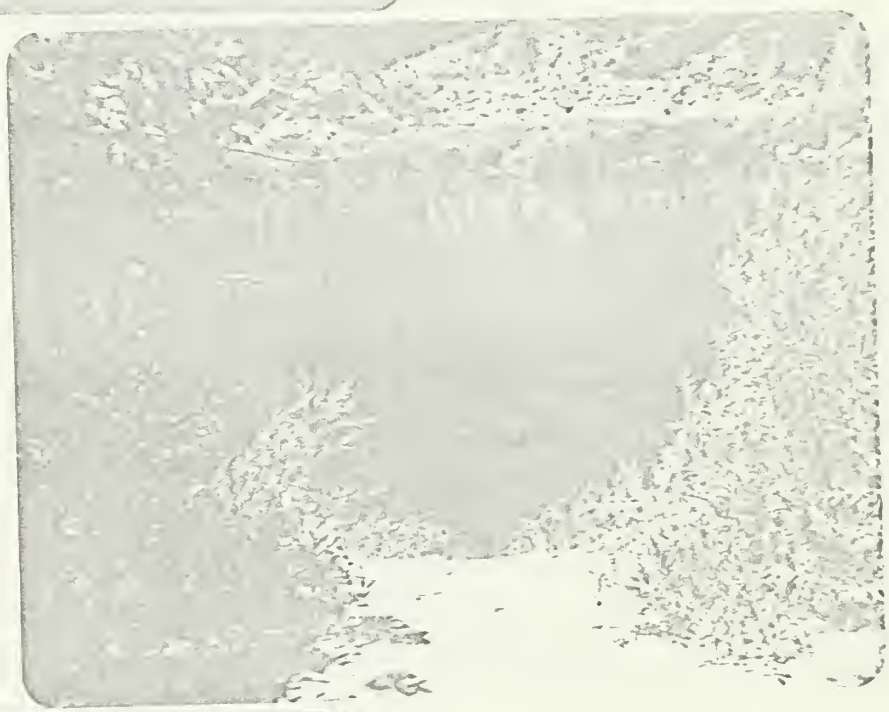


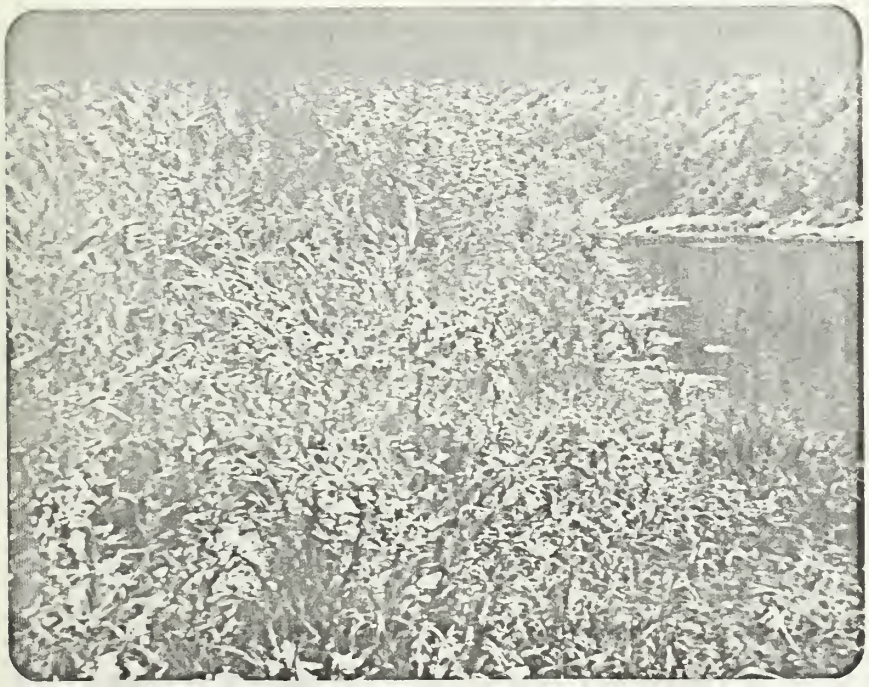
PROPOSED WANAKA SPRING
EXPANSION
(adjacent to BLM land)

SITE I ACCESS AREAS FROM HIGHWAY

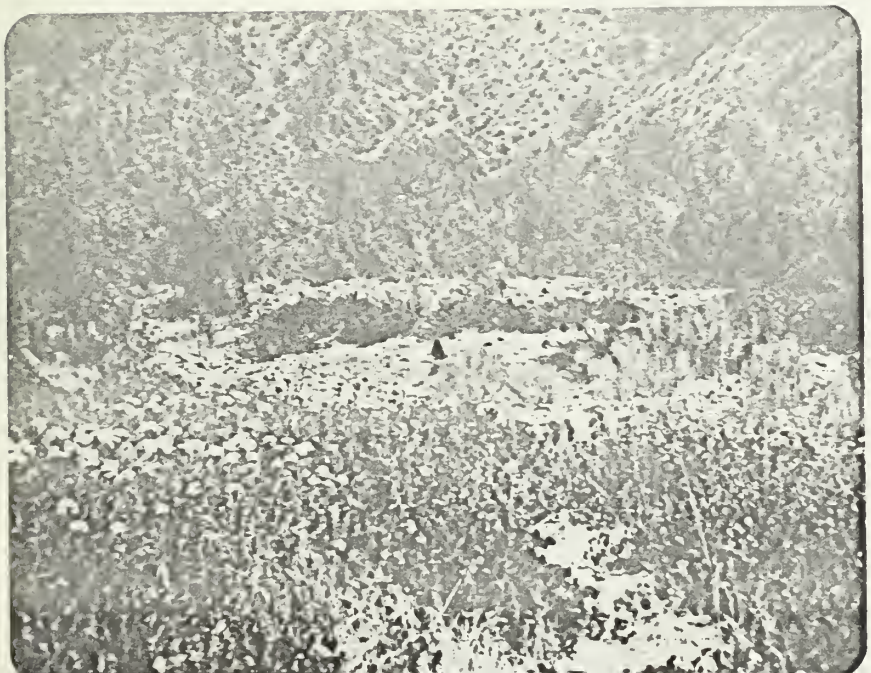


SITE I

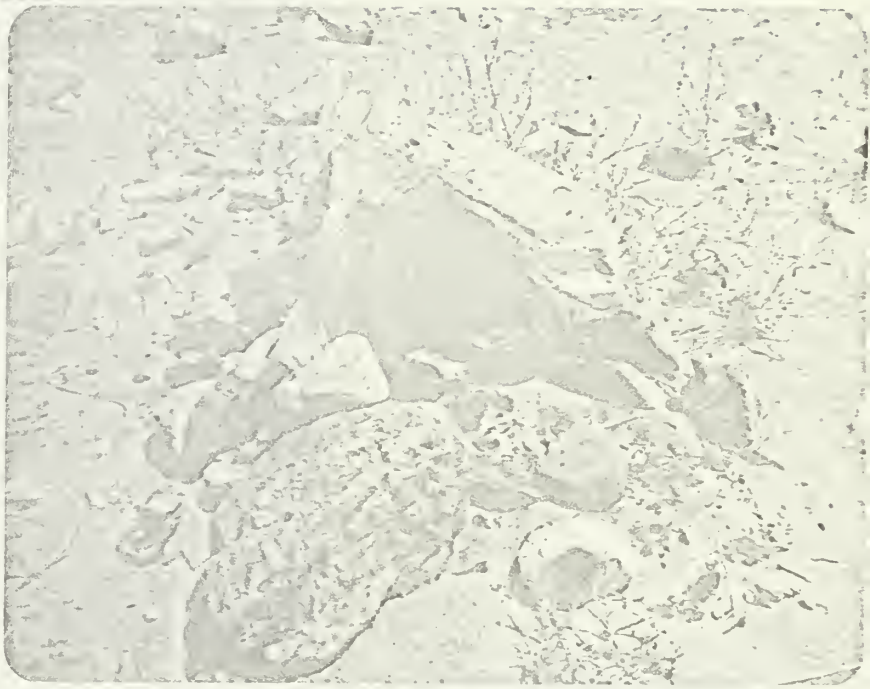


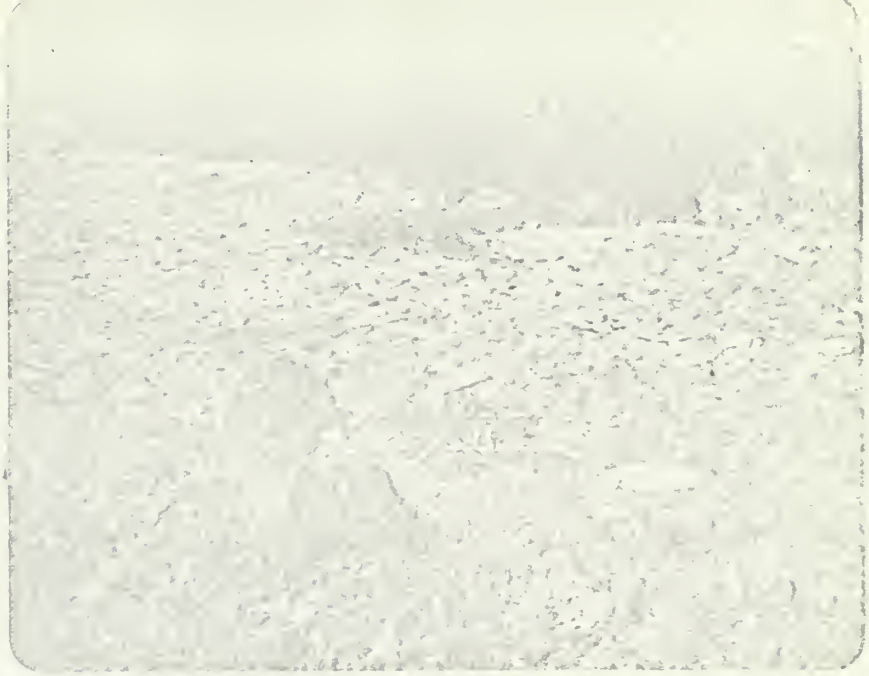


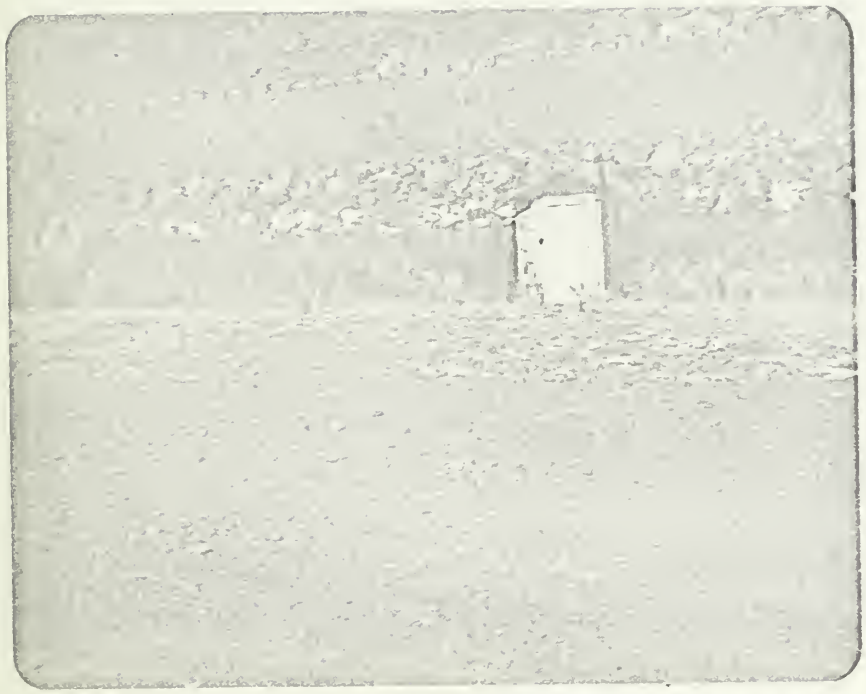
SITE I



SITE I USAGE







SITE II

SITE II

SITE III

SITE III

SITE IV

MINING ACTIVITY AT SITE IV

NORTH SIDE OF SITE V

SOUTH SIDE OF SITE V
(proposed camping area)

ACKNOWLEDGEMENTS

BLM Staff

Robert Fay
Steve Tarnay
Bert Hart
George Clarke
Jan Miller

Outside Agencies and Persons

MillardCoots - California Department of Fish and Game, Redding
Wayne Harris - Pacific Power and Light Company, Yreka
Larry Espey - Pacific Power and Light Company, Portland
Dave Rogers - California Department of Fish and Game, Yreka
Ed Anderson - Soil Conservation Service, Yreka
Chris Selman - Siskiyou County Museum
D. A. Gravenkamp - Director of Public Works, Siskiyou County
County Assessors Office
County Planning Commission
U.S. Forest Service - Oak Knoll Station
Jim Liskey - local resident
Charles Liskey - local resident

Other Resources not Identified in Report

Middle Klamath Planning Unit - URA and MFP

This intern report was read and accepted by a staff member at:

Agency: THE BUREAU OF LAND MANAGEMENT

Address: 2460 Athens Avenue
Redding, CA. 96001

This report was completed by a WICHE intern. This intern's project was part of the Resources Development Internship Program administered by the Western Interstate Commission for Higher Education (WICHE).

The purpose of the internship program is to bring organizations involved in community and economic development, environmental problems and the humanities together with institutions of higher education and their students in the West for the benefit of all.

For these organizations, the intern program provides the problem-solving talents of student manpower while making the resources of universities and colleges more available. For institutions of higher education, the program provides relevant field education for their students while building their capacity for problem-solving.

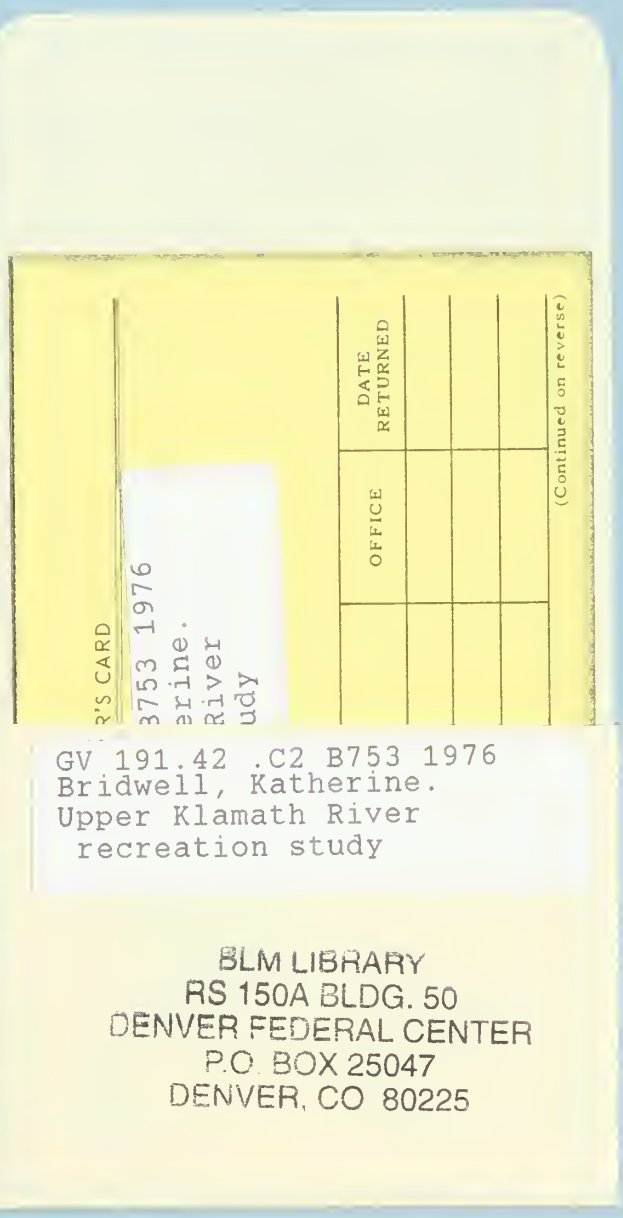
WICHE is an organization in the West uniquely suited for sponsoring such a program. It is an interstate agency formed by the thirteen western states for the specific purpose of relating the resources of higher education to the needs of western citizens. WICHE has been concerned with a broad range of community needs in the West for some time, insofar as they bear directly on the well-being of western peoples and the future of higher education in the West. WICHE feels that the internship program is one method for meeting its obligations within the thirteen western states. In its efforts to achieve these objectives, WICHE appreciates having received the generous support and assistance of the Economic Development Administration; the Jessie Smith Noyes Foundation; the National Endowment for the Humanities; the Wyoming Office of Manpower Planning; and of innumerable local leaders and community organizations, including the agency that sponsored this intern project.

For further information, write Bob Hullinghorst, Director, Resources Development Internship Program, WICHE, P.O. Drawer 'P', Boulder, Colorado 80302 or call (303) 492-7177.

3770-25214490004570O:
55:276:WICHE:2H296

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225

Bureau of Land Management
Library
Denver Service Center



GV 191.42 .C2 B753 1976
Bridwell, Katherine.
Upper Klamath River
recreation study

BLM LIBRARY
RS 150A BLDG. 50
DENVER FEDERAL CENTER
P.O. BOX 25047
DENVER, CO 80225